THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK.

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

Perfect Agriculture is the true foundation of all trade and industry.—Liebig.

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For the Farmers' Cabinet.

Adulterated Milk.

To the Editor,—I noticed in the last No. of the Cabinet, a reference to a Committee appointed in New York, to enquire into the character and effects of certain manufactured milk, which is not a little complained of in this said city of Gotham. Since the issuing of the Cabinet, I have come across some remarks in the *Farmer and Mechanic*, at the severity of which I was not a little astonished: but I should be still more so, could I entertain no doubt of their justness. I send the extract, and hope to see it in the Cabinet, not because I suspect that we are imposed upon here with any such abominations, but that we may be on our guard, as it is too true, that what is perpetrated in one city, may also be in another. Adulteration of milk should be discouraged and frowned upon, and reprobated without benefit of clergy: no quarter should be shown it. We take it ourselves and we give it to our infants at their tenderest age, and the idea is revolting, that we may possibly be administering to them a drugged—a poisoned beverage, which we would not offer to a decent cat, if we knew its composition. Honest men should be dealt with for milk, and they should be paid a good price for it. We want not even pure water added to it; and if we did, we have our own hydrants. Excuse my earnestness, and believe me, &c. D.

Philadelphia.

Were a stranger perfectly unacquainted with the various tricks and deceptions of our city, to pass through the streets and with all the other paraphenalia of the life-movements and business of New York, notice the number, appearance and inscriptions on the thousands of milk wagons that are constantly passing through our streets, he would at once be struck with the idea, that probably in no city in the world, the people were so favoured with pure and wholesome milk as ours. We have vast numbers of vehicles, many of which are handsomely painted covered wagons, conspicuously labelled "Pure Orange County Milk," "Premium Dairy," "Pure Country," "First Premium," "Bloomingdale Meadow," "Pure Milk from Connecticut," &c., &c., together with numerous other attractive titles. Who uninitiated in the nefarious arts of the venders, would suspect that four-fifths of these vehicles contain the most abominable and deleterious compound that ever disgraced,—we had al-

most said,—the beasts to which they are attached, but more appropriately, the brutes by which this poison is sold!

Reeking from the inflamed and half-putrid, unnatural fountains of the diseased and swill-fed animals that produce it, odorous with the peculiar scent of the distillery, and nauseous from the filth of the miserable stalls where the cows are constantly imprisoned, this wretched, fevered, and poisoned liquid is served to the families of our citizens, carrying with it the germs of intemperance, disease and death, and very essentially contributing a generous part to the weekly bills of mortality in the city.

In these details we are not mistaken. The fact is obvious to all who will take the trouble to investigate the subject, and its truth cannot be controverted.

That we may not be mistaken in this matter, we will merely refer to *one milk establishment* in this city, without adverting to some score of others in its vicinity, where our "Pure Orange County" and "Premium Dairy Milk" is manufactured.

This establishment alone furnishes some 15,000 quarts per day, which may be distinguished from good milk by its peculiar smell. It carries with it the odor of the slops from which it is made, and no one, as we are assured, need be deceived by it, at least no one who is in the least acquainted with that odor.

The stalls in which the animals are confined, are made to occupy the smallest possible space; the ceiling is laid within a few inches of the cows' backs, giving no chance for the fresh air to find its way to the imprisoned beasts, which, having once taken their places, never stir from them till they are removed to be converted into beef, or what very frequently occurs, death from the unnatural and deleterious food and injurious keeping, and their bloated carcasses are given over as food to the hogs, which are, in their turn, to become "wholesome food" for the stalls of our markets.

The swill with which the cows are fed, already a thin and diluted substance, is still further diluted with water, and this is used *hot* to insure a more rapid operation of the *animal distillation*, or rather *filtration*, through the fevered and diseased animal to the milk cans of the still dairyman.

But such production is attained with the loss of the natural colour of that article, which now assumes a light blue complexion. To restore it to the rich yellow white, which is desirable, a process similar to that of the liquor distiller is resorted to, and the same substance is used to produce the effect that is applied to colour "pure spirits" and manufacture "Pure French Brandy" "*for medicinal purposes*," viz., burnt sugar. This colouring, however, is by far the most innocent article in the whole compound.

The distillers themselves, generally, do not engage in the milk manufacture, but construct the stalls and let them out to others, at about $4 per annum. These stalls, says the Tribune—in an article on this subject—are occupied by persons devoted to this branch of business, owning from one cow to fifty, according to their means. "Those who own cows enough have a wagon painted 'Pure Orange County Milk,' 'Bushwick Premium Milk,' or some equally attractive rural title, disguise themselves as countrymen, and sell the product of their own capital and labour to be consumed by the families of the city; those who have fewer animals sell their milk to the more extensive dealers.

"Beside the $4 yearly rent, the honest milkman pays for the distillery slops which his cows consume, at the rate of eight or nine cents for a barrel, which is the daily ration of one cow. He formerly paid six cents, but as the demand is now greater, the price has risen in obedience to the well known principle of political economy. To produce a barrel of this liquid of good quality requires a bushel of grain; but here, as in some other branches of trade, competition comes in to injure that honour which the proverb declares to exist even among thieves. The manufacturers of swill have, it is said, discovered that water may be used to increase the quantity of that as well as of other fluids which they produce. Taught by the sharp suggestion of interest, they have thus in shrewdness gone beyond that liquor dealer, who boasted that he had in his yard a simple pump which netted him $2000 a year. By means of hot water properly applied, the distillers convert a barrel of genuine slops into a barrel and a half. This enables them to supply a greater number of cows, and while for every bushel of innocent grain daily forced to yield its contribution of intoxicating spirits, they formerly provided sustenance for one animal, they now make two bushels do for three. Such is the ingenuity practiced in these establishments.

"When the cows begin to cease giving 'milk,' the time approaches for them to be slaughtered for the market. Indeed, they could not long exist after they had ceased to fulfil that function, which is a great channel for the escape of the disease induced upon them by the close confinement, and the food which the troughs daily waft to them from the distillery. When killed, their bloated flesh is said to have the appearance of whole-

some meat, but in cooking it shrinks into not more than a quarter of its original quantity; the difference consists of foreign or diseased matter, which passes off in the process."

These are facts notorious to some of our citizens, and should be understood by all, particularly those who feel an interest in the health of the community. The subject is one of deep interest, and the press, as the faithful guardians of the welfare of our citizens, should not be silent on the subject. Let it be shown to those who are now unmindful of the fact that the above is, in a great majority of cases, the base and villainous compound—the baneful and poisonous article purchased and used as "pure milk," and put into the mouths of our friends and our children; and further, that this very *drug*, for it cannot be called by a better name, is a most prolific cause of disease and death among a great part of the younger portion of the community. We say to all, *Beware of Distillery Milk Slops!*

Mexican Farming.

At the New York Farmers' Club on the 20th ult., a person by the name of Gregg, said that his acquaintance was with Northern Mexico, Saltillo, Monterey, Chihuahua, and where sheep are raised to a large amount, whence the city of Mexico obtains mutton. He understood and believes that five hundred thousand of these sheep are annually driven from Northern Mexico, south. This breed is excellent for its mutton. He never tasted better, and very little as good. The sheep are quite small, not more than half the size of the common sheep of the United States. Their fleeces are hardly finer than goat's hair, and are only used for coarse purposes. The wool hair is four to six inches long—some say it is a hybrid of sheep and goat. The animals are furnished in many cases with *two pairs of horns*, sometimes a few of them are found with *three pairs*. These sheep are generally valued at about one dollar each, and their mutton sells for three or four cents a pound.

In Northern Mexico there is no tillable upland. None but vallies and river bottoms, lands which lie so that they can be irrigated, are used for cultivation. Hogs are not used to any considerable extent—they are chiefly used for their lard. The meat of goats is very commonly used by the lower classes—and mutton by the higher classes.

Their cattle are rather smaller than those of our western country, and are remarkable for their long horns. He had seen many of them three feet in length. Indian corn is raised everywhere—cotton, wheat and sugar also are raised in considerable quantities. He saw some of the largest sugar cane growing near Monterey. He had seen stalks well jointed for eight feet in length, and they were about six inches in circumference. The sugar cane of Cuba is larger, but it grows seldom more than two or three years from the root, while the Mexican cane grows four or five years in succession from the root. The agricultural implements of the country are very badly contrived. Their plough is made of a couple of sticks of wood, seldom pointed with iron, drawn by oxen pulling by their horns. Common labourers are the same poorly paid—generally run in debt to the landlord, and not allowed to leave him in debt—which they are usually unable to pay. The pasture on the uplands is very fine, for where the grasses are dried up by the season they constitute *fine feed as hay*. The farms are fenced by chapparel—a term signifying a thicket. They make no butter, but a good deal of poor cheese. He never saw a Mexican have a churn. Some of our Yankees at Saltillo, who were connected with a cotton factory there, make and sell butter to good account. The markets at Saltillo are well supplied, but the great body of the people live poorly. They chiefly subsist on cakes made of Indian corn—and on beans. They use lime in boiling water to hull their corn, and then grind the grain to a paste, between two stones—something as a painter grinds paint. They make it into small round cakes, called *Tortillas*, and bake them on a piece of sheet iron, if they have it, or on a stone. Great crops of Indian corn are raised in the valleys of Monterey, Chihuahua and Mondova. Fine wheat is also raised all the way from Saltillo to Chihuahua. They get thirty and forty, and sometimes fifty bushels to the acre. They say that they sometimes *get an hundred fold!*

He said at Mier, some two years ago, an iron plough was introduced, but that it was brought before the Inquisition and sentenced to have its wood work burned and its iron thrown into the river.

Vermont Farming.—The largest farm in Vermont is said to be that of Judge Meech, at Shelburn, eight miles south of Burlington. A correspondent who has been over it, says this year he will mow over 500 acres and cut 1000 tons of hay. He keeps 300 sheep, and has now 400 head of neat cattle. A few days ago he sold fat oxen enough to amount to the sum of $2460. He has also sold this season 1000 bushels of rye.

Horses—Oxen.

To the Editor of the Farmers' Cabinet:

As his horses are the most expensive article in the farmer's outlay, after he has bought his land and built his house, it is of course of the first importance that he should be well instructed in all that relates to their keep and general management. In reading the following extract from Colman's Tour, I was not only of the mind that we might, in this country, gather some valuable hints from it, respecting the treatment of this animal, but that it would be to the general advantage if oxen were much more used among our farmers than they now are. I was also rather surprised at our superiority over the English in training these patient beasts. Nowhere, I apprehend, is the ox more thoroughly disciplined than in the old *Bay State.* If I may be allowed to wander from the horse to the ox, and from him again to the horse, without method or rule, just as my thoughts occur, I would here remark, that farmers in this country, spend too little thought or labour in the care of their horses. "A horse well groomed," I once heard an experienced old man observe, "was half fed:" and the writer of this is well satisfied, there is much reason for the saying. L. P.

Among the most improved animals in the kingdom, horses take a prominent place; and a circumstance of difference, in this matter, between England and the United States, which strikes one at first sight, may be called the division of labour among the horses. The American horse, in most of the States, is, generally, a horse of all work. Here, the horses are bred and trained for, and exclusively confined to, particular departments,—sporting, pleasure, travelling, draught or agricultural labour; and nothing is more rare, than the transfer of the animal from one department to the other. So we find the race-horse, the hunter, the carriage horse, the draught horse, the roadster, the saddle horse, the pony for children and ladies, the general hack, and the farm horse. This comes of the immense wealth of the people, and is adapted to give them the best advantages of each kind. It may surprise some of my friends, to tell them, that I have more than once found forty hunting horses in one gentleman's stable, for himself and his huntsmen; and in one instance, I found a stud of eighty horses, of different kinds, exclusive of the farm horses. The perfection to which these animals have been brought, the condition in which they are kept, the tenderness, and kindness, and care, with which they are treated, and the admirable manner in which they are groomed, are circumstances, here, all over the country, in the highest degree worthy of remark. I have already referred to them. Their hours of rest, of feeding, and labour, are observed with strictness; their stables are spacious, lofty, well-ventilated, and adapted to preserve, as far as may be, an equable temperature; they are carefully bedded, and cleanly littered, and whatever would be offensive, at once removed; they are thoroughly curried and brushed, and a horse brought into the stable in a state of perspiration, is never left until he is completely dried by rubbing; nor, in any case, have I seen a horse left to stand still, exposed to a cold draught of air. The treatment of them is most exemplary and creditable; and is no more than just to animals, incapable of taking care of themselves, to whom we are indebted for so much of pleasure and so much of profit. At the house of an eminent nobleman, whose hospitality I enjoyed, it was the invariable custom of the family,—ladies and guests, as well as the master,—about nine o'clock in the evening, to go, by a covered passage, into the stables, where thirty horses were kept, to see that the grooms and ostlers were at their post, that the horses were well, and cared for, and the stable in good order. Nothing could exceed the cleanliness and order in which everything appeared. At one of the principal breweries in London, where forty of the largest size dray-horses are kept, the manager informed me that, after six years hard service, the horses receive their freedom, are sent into the country, exempted from all labour, and kindly cared for during the rest of their lives. I confess, in observing these kind provisions and this extraordinary care, I have not been able to suppress the wish, that many of the bipeds, who share with these animals in the labour of the field, —not unfrequently performing the hardest part of it,—could experience, in their own persons, an equal care, and find in their cottages, on their return from a hard day's work, even a moiety of the comforts with which the stables of their co-labourers are provided. It would be doing great injustice, to say that this is not often done by many persons, who have no greater pleasure than in providing for the comfort and welfare of their dependants. It is only to be regretted that the practice is not universal.*

* No person can have passed through the highly improved territory of the Duke of Buccleuch, in Dumfriesshire, which the public road traverses for more than twenty miles, and observed the clean and comfortable cottages of the labourers, which constantly meet the eye; nor have seen the almost luxurious provision made by the Duke of Devonshire for his dependants,

In the breweries in London, and in the drays in the cities, horses of an enormous size are employed; and the same kind of horses are employed on many of the farms. The weight of one of them, ascertained in my presence, exceeded seventeen hundred pounds; and he was by no means extraordinary for size. I do not desire to see such horses introduced among the farmers of the United States. Their motion is slow and clumsy, and their keep expensive. In cities, where the vehicles are heavy, and the burdens of coal, and beer, and other goods, very great, they are well suited to the service for which they are used. As far as proportion, colour, and action, are concerned, they are, certainly, magnificent animals. With many farmers, these horses are raised, not as being preferred for farm labour, but for sale in the cities; and after being broken to service on the farm, are, at a proper age, sent to market.

But the horse best adapted to agricultural purposes is of a smaller size, a compact form, short, strong, and muscular limbs, full-breasted, and with round buttocks. There are three breeds of horses in the kingdom, distinguished for their valuable properties as farm horses; these are the Cleveland Bay, a horse of great strength, and good size and figure; the Suffolk Punch, a large and serviceable horse; and especially the Clydesdale horse, almost exclusively preferred among the excellent farmers of Scotland, particularly in the Lothians. I have seen nothing superior, in my humble judgment, to the last horse, for farm labour, combining good size, with compactness, strength, and action. In Ayrshire, the farmers, being of an opinion that their fine breed of horses was deteriorating, recently imported a stallion from Flanders. This horse was a model of compactness and strength. He was fifteen and a half hands high; his girth, behind his shoulders, was seven feet four inches, and seventy-five inches round his neck, at the base; he was twelve years old, and cost sixty guineas, in Flanders.

in his picturesque village of Edensor; nor the humane provision made by the late Lord Leicester for his aged and decayed labourers, at Holkham; nor have witnessed the extraordinary and beneficent exertions of Lady Noel Byron, by allotments, loan, and benefit societies, and industrial schools, for the comfort, instruction, and improvement of her dependants and the poor; nor the beneficent and parental conduct of many, *many* others, to whom the strong and unaffected attachment of their labourers and dependants evinces the deepest sense of kindness, but whose names it might seem invidious to mention,—without a grateful acknowledgment of the goodness of Heaven, in making minds so just and generous the almoners of its bounty.

The farm horses in ploughing, are never worked more than eight hours a day. The ploughman feeds and cleans them at four o'clock in the morning. They are harnessed and the plough started at six o'clock. They are brought to the stable again at two o'clock, and fed, and thoroughly groomed, curried, cleaned, bedded, &c., and left for the night, at dark. The feed is almost always cut for them, or if given long, given in small quantities; and the oats and beans are crushed. On one farm, the allowance for a farm horse of the largest size was, two bushels of oats, and one peck of beans, and two trusses of hay,—fifty-six pounds each,—per week, in winter; in summer, green feed, vetches, clover, or rye grass, was substituted for the hay. The general allowance is a peck of grain, half oats and half beans, and fourteen to sixteen pounds of hay, per day. The army allowance for a horse is fourteen pounds of hay, ten pounds of oats, and seven pounds of straw, per day; "with hard work, less hay and more corn; with little work, less corn and more hay." The horses belonging to the Queen's Guards, which are often to be seen in the streets of London, and always on state occasions, are beautiful animals, and subjects of universal admiration. They are of a black colour, and bred, I believe, on the continent, purposely for the army.

The general rule is, to keep, on arable farms, a pair of horses for every forty acres; in some cases the proportion of land to the team is larger. One of the best farmers in Scotland allows seven horses for two hundred acres. His land is accessible, and extremely favourable for all farming operations. The cost of keeping a working horse—exclusive of interest or deterioration—he estimates at twenty-five pounds, or more than one hundred and twenty dollars per year. These expenses all have reference to the local prices of agricultural produce; and I give them rather as matters of curiosity, than of direct utility to my American readers. The amount of ploughing for a day's work is an acre of land, but in some cases, an acre and a half. One farmer speaks of ploughing, usually, seven acres in a week, with one pair of horses. The furrow slice varies from eight to eleven inches, and the distance travelled in such case, is from twelve to sixteen miles a day. It does not lie within my province to speak of other horses than those employed in agricultural labour.

Oxen are employed for farm labour to a small extent, and in few counties. On Lord Leicester's farm, at Holkham, so much and so long celebrated, they are used and worked in leather harness; and in some places I

have seen them worked singly in harness. The general impression is, that they will not do so much work as horses, are not so easily trained, and are more expensive to keep; every one of which positions is, in my opinion and experience, erroneous. I believe these opinions arise out of an entire ignorance of the training of oxen. Nothing can be more awkward than the management of them, which I have seen here. As they are managed and trained in the best parts of New England, their docility is perfect; working without a driver, in the plough-field, as well as with one; performing as much work as a pair of horses, and performing it as well; costing comparatively nothing for harness, since a wooden yoke and bows, and iron chains, which will last for years, are all that are required; when well cared for until six years old, paying, by their growth, for the feed which they consume; and when kept in good condition, as they always should be, if ruined for work by any injury, or if at an age to be turned off for beef, exposing their owner to no loss. In everything but road work, I am quite satisfied that a pair of well trained oxen will perform as much work as a pair of horses, and at a much less expense. This was the opinion of an English ploughman, who lived some time in my service, and worked wholly with oxen. He had, before this, been used to horses, and a more skilful ploughman I have never seen on either side of the water. The use of oxen has become much less common than before the introduction of the improved breeds of cattle, which are now brought so early to maturity. Formerly, it was not the custom to send oxen to market, before five years old; now the Durham stock, and others, go at eighteen months to three years old. Under this arrangement, there is no opportunity to get any work out of them.

The Scotch plough with two horses abreast, and seldom use more than two. In many parts of England, horses are worked *tandem;* and I have sometimes seen five and six, at length, to a single plough. This is certainly excessive, and the turnings, in such case, most inconvenient; but the motive for putting the horses at length is, that, where the land is heavy, it may not be trodden hard.—*Colman's Tour.*

Fattening Poultry.—It is asserted in the "Transactions of the Society of Arts," that there is a great advantage in fattening geese, turkeys, and in short, fowls of every description, on potatoes mixed with meal. On this diet they are said to fatten in less than one-half the time ordinarily required to bring them to the same condition of excellence, on any kind of corn or even on meal itself. The potatoes must be boiled and mashed fine whilst they are hot, and the meal added, just before the food is to be presented.

Order on Farms.

One of the editors of the *Cultivator* in his recent peregrinations, visited the farm of John Delafield, consisting of 350 acres, in the neighbourhood of Seneca Lake. He was highly gratified with the system, order and neatness observable in every department. We make the following extract from his notes.—Ed.

Every person employed on the farm, is furnished with a printed card, comprising the rules and regulations.

It is expected that all persons employed on the Oaklands Farm, *will carefully attend to the following system:*

Regularity in hours.

Punctuality in cleaning and putting away implements.

Humanity to all the animals.

Neatness and cleanliness in personal appearance.

Decency in deportment and conversation.

Implicit obedience to the proprietor and foreman.

Ambition to learn and excel in farming.

Maxims of order and neatness.

1. Perform every operation in proper season.
2. Perform every operation in the best manner.
3. Complete every part of an operation as you proceed.
4. Finish one job before you begin another.
5. Leave your work and tools in an orderly manner.
6. Clean every tool when you leave off work.
7. Return every tool and implement to its place at night.

Children's Boots and Shoes.—The attention of every mother should be given to the state of her children's feet. How much subsequent pain, distortion and lameness, might be spared, if a little consideration were given in time to the child's shoes and boots. As a general rule, if proper length and width be given, all will be well; but this must be seen to frequently, as little feet will soon grow larger.

If shoes are worn, they should be easy across the toes, and of good form in the sole, hollowed and arched at the waist, and snug

at the heel—if boots, then the elastic the same as ladies'.

If the ankles are weak, a surgeon should be consulted without delay. I have benefitted many children by making an elastic lace boot, which, from the support it affords, compressing the muscles of the foot, and by bearing well up by means of a spring under the arch of the foot, has prevented lameness, and restored the feet and ankles to their natural form.—*Hall's Book of the Feet.*

Age of Poultry.

FARMERS usually sell poultry alive, excepting in some parts of the country, such as the Borders, where geese are killed and plucked for the sake of their feathers before being sent to market. Poulterers in towns, on the other hand, kill and pluck every sort of fowl for sale, so that the purchaser has it in his power to judge of the carcass; and if he buys an inferior article at a high price, it must be his own fault. It is easy to judge of a plucked fowl, whether old or young, by the state of the *legs*. If a hen's spur is hard, and the scales on the legs rough, she is old, whether you see her head or no; but the head will corroborate your observation, if the under bill is so stiff that you cannot bend it down, and the comb thick and rough. A young hen has only the rudiments of spurs, the scales on the legs smooth, glossy and fresh coloured, whatever the colour may be, the claws tender and short, the under bill soft, and the comb thin and smooth. An old hen-turkey has rough scales on the legs, callosities on the soles of the feet, and long, strong claws; a young one the reverse of all these marks. When the feathers are on, an old turkey-cock has a long beard, a young one but a sprouting one; and when they are off the smooth scales on the legs decide the point, beside difference of size in the wattles of the neck, and in the elastic snot upon the nose. An old goose, when alive, is known by the roughness of the legs, the strength of the wings, particularly at the pinions, the thickness and strength of the bill, and the firmness and thickness of the feathers; and when plucked, by the legs, pinions and bill, and the coarseness of the skin. Ducks are distinguished by the same means, but there is this difference, that a duckling's bill is much longer in proportion to the breadth of its head than that of an old duck. A young pigeon is easily discovered by its pale coloured, smooth scaled, tender, collapsed feet, and the yellow, long down interspersed among the feathers. A pigeon that can fly has always red coloured legs and no down, and is then too old for use.—*Stephens' Book of the Farm.*

Portable Soup.

WHEN one pound of lean beef, free from fat and separated from the bones, in the finely chopped state in which it is used for beef sausages or mince-meat, is uniformly mixed with its own weight of cold water, slowly heated to boiling, and the liquid, after boiling briskly for a minute or two, is strained through a towel from the coagulated albumen and the fibrine, now become hard and horny, we obtain an equal weight of the most aromatic soup, of such strength as cannot be obtained, even by boiling for hours, from a piece of flesh. When mixed with salt and the other usual additions, by which soup is usually seasoned, and tinged somewhat darker by means of roasted onions or burnt sugar, it forms the very best soup which can in any way be prepared from one pound of flesh. The influence which the brown colour of this soup, or colour in general, exercises on the taste, in consequence of the ideas associated with colour in the mind,—ideas of strength, concentration, &c., —may be rendered quite evident by the following experiment. The soup, coloured brown by means of caramel, is declared by all persons to have a much stronger taste than the same soup when not coloured, and yet the caramel, in point of fact, does not in any way actually heighten the taste. If we allow the flesh to boil for a long time with the water, or if we boil down the soup, it acquires spontaneously, when concentrated to a certain point, a brownish colour, and a delicate flavor of roast meat. If we evaporate it to dryness in the water-bath, or if possible at a still lower temperature, we can obtain a dark brown, soft mass, of which half an ounce suffices to convert one pound of water, with the addition of a little salt, into a strong, well-flavored soup. The tablets of so called portable soup prepared in England and France are not to be compared with the extract of flesh just mentioned; for these are not made from flesh, but consist of gelatine, more or less pure, only distinguished from bone gelatine by its higher price.—*Liebig's Researches on the Chemistry of Food.*

A Modern Farmer.

TEN years ago it was a goodly thing to visit the Philadelphia market, and see the excellent provision which the honest husbandman set forth to gratify the palates and increase the flesh of our citizens. Each

farmer appeared to be a proxy for the Goddess of Plenty, and poured forth from his *Cornucopia* the fat of the land, and the abundance thereof; flesh, fruit and vegetables,—tomatoes, plums and spring chickens —potatoes, strawberries, and sucking pigs. His stall was up-heaped with the bounties of nature—the shambles groaned with an overweight of nutrition. Long-bearded turkeys loomed forth in lengthened lines, luxuriously lucious; great geese gleamed out in greasy garnishment, stimulative of glorious feats in gormandizing gastromy; delicate ducks, deliciously dainty, dangled by dozens, and the anxious trenchman was puzzled how to choose from so many piles of portly poultry. Substantial solids were also there to please the purchaser, and add their quota to the support and gratification of the inward man. Beef, the fattest and fairest, veal, tender and delicate, mutton, fresh and juicy, pork, corn fed and substantial. In the white tub, the golden butter peeped out from amidst green and moist leaves; in the rustic hamper, white eggs were nestled among cut straw; peas, beans, beets, carrots, and other vegetables were gathered round in appropriate vessels. In truth, it was a goodly sight to see the farmer part with his treasures, to adorn the domestic feast and gladden the hearts of civic partakers—whilst he, in exchange therefor, was gladdened with shining stores of gold and silver.

Such were the scenes which our markets daily afforded, and such were the husbandmen of other days, and such husbandmen are there yet, but they are becoming rare. Go into our markets now and ask for the farmer, and you will be shown an individual whose air and apparel put you strangely in mind of a journeyman confectioner. In amazement you ask, is that a farmer? Yes, that is a farmer of the modern school; there is the provision he brings, in those tubs, and there is his stock, a ladle, a japanned tray, twelve saucers, and twelve leaden spoons. He is a real modern farmer, one who cultivates the soil and raises ice cream.

He finds the labour of tilling the stubborn earth comparatively profitless—his plough is broken, and his sickle rusted—wheat and corn do not cover his broad acres, because grass is more suitable for cows, and rich creams, riches to him when frozen, can thereby more easily be obtained. But few poultry cackle round his farm house, or run with eager bills to pick up the scattered grain. Nor does the cheerful maid sing at the churn, and rejoice as she views the golden lumps—nought is heard but the cracking of the ice, or the eternal seesaw of the freezer as it is stirred amidst rock salt.

Yet his marketing finds a ready sale, and his frozen creams are lapped up by hundreds. Nor is he to blame; he but supplies the demand made by the citizens. Meanwhile, housekeepers groan at the scarcity and dearness of produce. Milk and cream, to dwellers in cities, are daily becoming more watery, and will soon become fabulous, butter and cheese will exist only in legend—poultry, flesh and flour, are also becoming scarce. The cause is evident, so long as it is more profitable to the farmer to grow ice creams than cultivate the soil and increase his farm stock, so long will he turn his attention to such a valuable branch of agriculture. It may be a new thing to many, but it is undoubtedly true that the present high price of provisions is partly owing to the fact that so many farmers in the neighbourhood of our Atlantic cities have turned their attention wholly to the manufacture of luxuries to tickle the palates of our dainty loving citizens.—*Ledger.*

Management of the Manure Heap.

No one, who has been watching the progress of agriculture for the last few years, can for a moment dispute the importance of the foreign substances, which, like nitrate of soda and guano, have been introduced into husbandry. But admitting to the fullest extent, the value of these materials; admitting, too, the utility of some of the artificial manures compounded for sale; we must observe, that it is most absurd for the cultivator to put himself to the expense of purchasing them until he has utterly exhausted all the means which his farm affords him, of increasing the fertility of his land. Such substances should be employed *in aid* of ordinary manure, not *instead* of it. The art of farming and market-gardening consists, or should consist, in obtaining the greatest possible amount of food at the smallest possible expense.

Now, it must be obvious, that those manuring substances which are necessarily produced on a farm, are the least expensive of all things; to the careful collection and preparation of them should the good husbandman turn his attention in the first instance; and when all the resources of skill are exhausted upon that preparation, it is time to look abroad for assistance. Farm yard manure is, therefore, the first object of improvement; and it is to this great end that our remarks upon manures have of late been directed. The man who wastes his

farm-yard manure and buys other things, can only be compared to him who should leave his wheat upon the ground, and buys rice or maize to make good his prodigality. We assert, without fear of contradiction, that the farmer does, in the great majority of cases, commit a folly equivalent to this; not indeed, intentionally, but from not knowing better.

It is not, however, merely because of its cheapness, that farm-yard manure is the best of all substances for enriching land, but because it contains such a great variety of substances, among which each crop finds that which it most requires, and in the fittest state for becoming its food. "Fortunately," says Dr. Daubeny, in one of his excellent agricultural discourses, "we are provided, in the dung of animals, with a species of manure of which the land can never be said to tire, for this simple reason, that it contains within itself not *one* alone, but *all* the ingredients which plants require for their nutrition; and what is perhaps of equal importance, existing too, in that precise condition in which they are most readily taken in and assimilated." No wonder then, that the Royal Agricultural Society of England should have made the subject of farm-yard manure the subject of one of their prizes, and that we should in the meantime be turning our feeble efforts in the same direction.

It must be evident to those who have considered the subject, that the great points to attend to are, first, to reduce the animal and vegetable matter of manure to a decayed state; and secondly, to *keep* everything that results from this decay, whether fluid or solid, or invisible, after it has been obtained. It is of no use to catch the hare, if you do not hold her. The farmer lets his stock trample straw and manure together in the yard, and by degrees it becomes partially rotten; it is then thrown into heaps, and allowed to ferment; and then it is used. The market gardener carts the long stable-litter from town, throws it into a heap, lets it ferment, and then applies it to his land. In both these cases, rain and other fluids wash away one part, which runs to waste; the fermentation drives off another, which disappears in the air; and what is left is, at the most, about half as good as it should be. This cannot be the way to manage manure.

What *should* be done, is something like this: every husbandman should have a place for preparing manure. It should be a trench or ditch, large in proportion to the quantity of manure to be prepared. The bottom and sides should be made firm with clay or any other material that will prevent a waste of the water used in preparing the manure. This trench should fall towards one end; and at that end a hole should be made—which we will call A,—and well puddled or lined with clay, so as to hold water, into which all the liquid matter that runs from the manure should drain. By the side of the trench should be a pump and well, which might be so contrived as to throw water in a stream all over the manure, when necessary. All things being ready, a quantity of raw manure, consisting as usual, of straw and all sorts of impurities, should be placed in a layer at the bottom of the trench, well watered, and trampled down; by this means it will be enabled to decay faster than if it was dry, for the mass will begin to heat; what water the straw cannot suck up, will run into the hole A, out of which it should afterwards be drawn, and poured again over the heap. At the same time that the layer of raw manure is placed on the floor of the trench, there should be scattered among it a quantity of gypsum—plaster of Paris—if that can be had cheap, or else some powdered green vitriol: then the fluid which drains away will consist of those ingredients or their elements, water, etc. The object of adding such substances, is to prevent the loss of ammonia, an invaluable substance, which flies away from manure, if you let it alone, but which either the gypsum or the green vitriol holds fast, and keeps with themselves in the manure. Gypsum—plaster of Paris—is, in many places, the cheapest material; but the wholesale price of green vitriol is not more than five shillings per one hundred weight in the London market; and probably the material called *salt-cake*, and now worth about three shillings and sixpence per one hundred weight, would answer the same purpose.

When there is a fresh supply of raw manure ready, it should be placed in a layer over the first, mixed with gypsum or green vitriol, or some other "fixer," and well trampled down; then let it be thoroughly watered with the fluid in the hole A, if there is enough there; or with water from the pump, if what is drained into A is not sufficient. Water or drainings should be constantly added to these heaps, for it is of the first importance that the manure should be kept continually moist, in order to hasten its decay. In this manner the manure heap may be increased from time to time, as raw manure accumulates, until it is too high to be conveniently raised further, or to allow of water or drainings being easily poured over it. By degrees the whole mass will become a soft pasty substance; and when in that condition, will be fit to put upon the land, or to lie by till wanted. In the latter

case, however, care must be taken not to allow any of its "goodness" to be wasted out of it again; and reservoirs should be formed at the edge of it, to receive what does run from it, which should be poured over it again, or carried and used elsewhere.

If this plan were merely speculative, we should have nevertheless thought it worth proposing; but it is, in fact, the result of experience. It is essentially the same as that practiced by Mr. Schattenmann, and seems to us the best method of managing the dung hill that has been yet proposed. It has the great merit of saving everything, of wasting nothing, and of causing no other additional expense than that of the purchase of the gypsum,—which would probably be bought without being thus applied—or of a boy occasionally to attend to the watering the dung hills. Although we entertain no sort of doubt of the extreme importance of attending to these suggestions, and of the *ample return* they will make for any expense connected with them, we shall be quite satisfied if any of our readers will try them first in a small way, and then ascertain for themselves the relative effect per load of common farm-yard manure, and manure prepared in this more careful manner.—*Professor Lindley.*

Burlington County Agricultural Society.

First Annual Exhibition, at Mount Holly, October 20th, 1847.

Premiums will be awarded according to the following schedule:

For the best cultivated Farm, of not less than fifty acres, exclusive of woodland, regard being had to the quantity of produce, the manner and expense of cultivation, and the profits, $10.

Horses.—For the best Stallion, $5.
For the second best do., $3.
For the best Mare, $5.
For the second best do., $3.
For the best Gelding, $5.
For the second best do., $3.
For the best pair of Matched Horses, $5.
For the second best do. $3.
For the best pair of Work Horses, $2.
For the best Colt, under one year old, $3.
For the best Colt, under two years old, $3.
For the best Colt, under three years old, $3.

Mules.—For the best team of four mules, $3.
For the second best team, of two mules, $2.

Cattle, Blooded Stock.—For the best Bull, under three years old, $5.
For the best Bull, under two years old, $3.
For the best Bull, under one year old, $2.
For the best Cow, $5.
For the second best Cow, $3.
For the third best Cow, $2.

Cattle, Common Stock.—For the best Bull, under two years old, $5.
For the best Bull, under one year old, $3.
For the best fatted Calf, under six months, $3.
For the second best fatted Calf, do., $2.
For the best Cow, $5.
For the second best Cow, $3.
For the third best Cow, $2.
For the best Cow, Steer, or Heifer, fatted, $5.

Sheep.—For the best Buck, $3.
For the best Ewe, $3.
For the best Flock, not less than twelve, $5.

Swine.—For the best Boar, $3.
For the best Sow, $3.
For the best sucking Pigs, not less than six, $3.
For the best lot of Pigs, under nine months, not less than four, $3.

Poultry, Live.—For the best lot, not less than eight, $3.
For the best pair, $2.
For the best pair of Capons, $3.
For the second best pair of Capons, $2.
For the best Turkey Cock, $2.
For the second best Turkey Cock, $1.
For the best pair of Geese, $2.
For the second best pair of Geese, $1.

Dairy.—For the best Cheese, not less than thirty pounds, $5.
For the second best Cheese, not less than twenty pounds, $2.
For the best lot of Butter, not less than six pounds, $3.
For the second best lot of Butter, not less than six pounds, $2.

Fruit.—For the best sample of Apples, not less than ten named varieties, $2.
For the second best sample of Apples, not less than ten named varieties, $1.

Grain.—For the best White Wheat, not less than one bushel, $2.
For the second best White Wheat, not less than one bushel, $1.
For the best Red Wheat, not less than one bushel, $2.
For the second best Red Wheat, not less than one bushel, $1.

For the best Oats, not less than one bushel, $1.

For the best field of Wheat, not less than five acres, $5.

For the second best field of Wheat, not less than five acres, $3.

For the best field of Oats, not less than five acres, $3.

For the second best field of Oats, not less than five acres, $2.

For the best field of Indian Corn, not less than five acres, $5.

For the second best field of Indian Corn, not less than five acres, $3.

Potatoes.—For the best sample of Seedlings, $5.

For the best bushel of Potatoes, $1.

For the best Acre, $5.

For the second best Acre, $3.

For the best bushel of Sweet Potatoes, $1.

For the best specimen of any agricultural implement, a Certificate of First Merit.

For the best article of manufacture in iron, cutlery, glass, woollen, and cotton fabrics, and of manufactures generally, a like Certificate.

For the most satisfactory experiment, in converting green crops, or other vegetable matter, into manure, with full details, a like Certificate.

For the most satisfactory experiment in top dressing grass and grain, a like Certificate.

For the best experiment in increasing manures, a like Certificate.

Plank Roads.

Their construction and advantages, with observations on the present system of making public roads.

By George Geddes, Esq., Civil Engineer, Fairmont, Onondaga County.

Good roads are very important to the interests of agriculture. The surplus productions of the soil are valuable to the producer, just as they are near market, and if distant, the avenues for their conveyance, become a consideration of the first importance. The common roads of the country are very generally badly located, little or no regard having been paid to the grade; and the system by which they are attempted to be kept in repair, is such as must result in their being in bad condition a great portion of the year. The tax is an unfair one; for the persons who are to enjoy the benefits of the road do not pay for the repairs; but the persons who own property within the town or road district, are taxed in proportion to their property, without regard to the amount they are to use the road; and it often happens that in the vicinity of large towns the road districts are entirely unable to keep in repair a section of road, over which not only the produce of these districts is to pass, but the whole business of perhaps fifty such districts. The results of such a system must continue to give us bad roads; and the only remedy, is to adopt some course which shall result in taxing the travellers with the expense of keeping the road in order. No tax can be more equitable, if it be not in excess, than that of the toll gate.

The only thing to guard against, is the diversion of the money thus raised from the repairs of the road. In those sections of the country that are yet but sparsely peopled, it would be impracticable perhaps, to introduce a system requiring the payment of tolls from the traveller, as the expenses of collecting the tax would bear too large a proportion to the total amount. In such districts, the first settlers must open the roads, and continue to work them, until the amount of travel will justify the collection of toll. But in all those parts of the State that have been settled for any considerable period of time, we cannot too soon commence levying a tax upon those who use the roads, and expend the money thus raised, in the immediate vicinity of the gates, in repairing the roads. As the roads become better, we may lessen the rates of toll, being always strict in applying the receipts for the benefit of those who pay.

In some instances, it would be for the advantage of the public, to make a large outlay in order to have a good road before the receipts from tolls would be sufficient to make it. In such a case, the creation of a company, who will furnish the capital necessary to at once make a good road, and trust to the tolls to pay the interest and reimburse the capital within some fixed period of time, and besides keep the road in repair, will be for the public advantage.

Common road making, is a branch of engineering that perhaps has received less attention from scientific men, than almost any other. Canals, railroads, tunnels, and works of like splendor, are more attractive than the humble country road; and it has been trusted to a class of men who possess but small qualifications for the charge of so important an interest.

It might be impossible to determine the cost of all the roads in the State, so that the comparison might be made with the cost of the canals and railroads; so too, it might be impossible to make a correct comparison of the cost of the cars and boats, and the wagons and sleighs; but it is certain that the

sum total of the cost of railroads and canals, and the cars and boats, is vastly below that of the cost of the highways, and the wagons and sleighs that are used on them. The importance of the interest demands judicious legislation; and the application of the highest intelligence in the expenditure of the means provided. A proper system of laws would develope the skill necessary, and we must be content to wait for such legislation before we can expect to see such great skill exhibited in constructing roads. In every county, three commissioners should have charge of all the roads in their county; having in their employment a competent engineer, to direct the expenditure and superintend the erection of bridges, and all the repairs; this would soon produce a change vastly beneficial to the public.

The Revised Statutes contain a general law relating to turnpikes, in which the particular manner of construction is all specified, as though the revisers knew all that would ever be known about making roads. It is strange that it should have happened, that McAdam should have rendered himself so famous by teaching a system of road making precisely the reverse of the one determined upon by the revisers; but so it was.

They followed the old English plan, which required a bedding of stone upon which to place the facing of broken stone.

The peculiarity of McAdam's plan is, that there shall be no such foundation, but that the broken stone shall be placed directly upon the earth; experience having proved that, if there was a stone of any considerable size under the broken surface, it would in time rise up through it; *and he discarded every stone over four ounces in weight.*

Plank Roads have very recently been introduced into this country. According to the patent office report of January, 1843, they had their origin in Russia, and were introduced into Canada by Lord Sydenham, he being induced to try the experiment in consequence of the great cost, in the first instance, of McAdamising a road, and the expense of keeping it in repair.

The first road made of plank was near Toronto. The three miles nearest the city having been McAdamised; the plank road commenced at that distance from the city, and was extended some miles into the country. The plank road lasted eight years, requiring during that time merely nominal repairs. The McAdam road in the same time required an annual expenditure of four hundred dollars a mile in repairs—amounting in the eight years to $3,200 a mile, a sum much more than sufficient to replank a road. When the plank road required a new covering, one-half of the stone road was dug up and flung on top of the other half, and a track of plank eight feet wide was laid down in the place occupied by the stone. It happened that I visited Toronto at the time the plank road was rebuilding, and the eight feet track was being put into the stone road. The plank first used were sixteen feet long and three inches thick. They had worn out in the middle for a space of about seven feet wide—the ends of the plank being entire. The middle of the road had settled by the weight of the teams, and loads that had passed over it. The sills were sound enough to justify their use for another covering. I saw the eight feet track in use; and then expressed the opinion, that, as the narrow road was so much more evenly pressed down by the loads than was the wide road, it would be firmer, and that if more than one eight feet track was demanded by the travel, it would be vastly better to lay two eight feet tracks, than one sixteen feet, not only because they would settle more evenly, but that the facilities for passing would be greatly increased. A road sixteen feet wide, experience proved would be used in the middle. A wide load, going slowly along it, rendered it very difficult for a vehicle that was moving faster, upon overtaking the wide load to pass it. In making my report to the commissioners for the distribution of the stock of the Salina and Central Square Plank Road, at whose request I had visited Toronto, for the purpose of obtaining information upon this subject, I proposed two eight feet tracks for their road, and made my estimate of the cost accordingly. A year later I again visited Toronto, and to my surprise long planks were entirely abandoned. The road as it was extended into the country being made of a single eight feet track—having a smooth earth road to turn out upon, along side the plank.

The result of these examinations was, that we determined upon making a single track upon one side of the centre of the road, and wherever we had ordinary earth to grade twelve feet wide upon the other side of the centre. Over some light sand we laid two tracks, and in one instance for a short distance, we laid a sixteen feet road, owing to peculiar circumstances; so that we have a single plank track on one side of the road, and an earth road to turn out upon; and we have two tracks, four feet apart, of plank; and we have a wide plank road. The two separate tracks of plank are the most perfect road, and furnish the greatest facility for teams to pass. The eight feet track is next in convenience, for it being on the side of the centre of the road that gives

it to the loaded team that is going into town,—and the loading is chiefly going to town,—the unloaded team generally does all the turning out, while the loaded team travels on one side of the centre, and not in the middle of the road; while on the sixteen feet plank the traveller inclines to keep the centre, and the slow movements of the loaded team in turning out, very generally drives a light team off the ends of the plank upon sidling ground. When a team upon the single track is overtaken, it is much easier to pass it than it is when it is moving along the middle of the wide track; for the slow going team is on one side of the centre, in the case of the narrow road; and there is a twelve feet earth road on the other side of the centre, for the fast going team to pass by upon. The only way to make the wide track as convenient for passing as the narrow, is to grade an earth road outside of the ends of the plank; and that would add to the cost, and make the road bed so wide that it would be difficult to drain it well.

It has been proposed to fasten a scantling upon the middle of a sixteen feet track, leaving occasional vacancies for teams to cross from one side to the other, as a means of causing the travel to pass upon the ends of the track. This remedy for the evils of a wide single track, is expensive and objectionable from the inconvenience in crossing freely at any point.

Every view of the question results in this: that roads, that are not greatly travelled require but a single eight feet track, save over very soft ground; and that roads that require more than one such tracks, should have two narrow tracks in preference to one wide track. It is safe to say that whenever two tracks are demanded for the accommodation of the travel,—unless the necessity grows out of the fact, that the earth is very unsuited to road making,—that, that demand will surely justify the investment of the money the second track will cost; for it must be a very great amount of travel that will not be accommodated by a single eight feet track, with a carefully cared for earth road to turn out upon along side of it.

Experiments have been made to test the proper mode of laying the plank: "On the Chambly road the planks are twelve feet long, but laid diagonally, so as to make the road but eight feet wide. The weight of half the vehicle and load coming suddenly upon one end of the plank, and the other end not being kept down at the same time, the traffic constantly tends to disrupt the road, and the planks are loose, and spring from end to end." * * * "At Quebec part of the road has been planked, the plank being laid lengthwise. It was considered that the planks would stand better the friction, and when necessary, could be more easily taken up, and the road repaired. One strong objection to this mode of laying the plank is found to be, that the horses cannot keep their feet when much weighted, and are much exposed to falling, in consequence. Under all these circumstances most have approved the manner in which the planks are laid on the Toronto road." (Patent office report, 1843, page 129.)

In constructing plank roads, it is necessary to have the earth upon which the plank are to be laid, broken up and made fine, that they may touch the earth at every point. This is important, for if any space be left for air under the plank, or alongside the sills, dry rot follows. The sills should not be large: four inches square is sufficient. They should be perfectly bedded into the earth, and there should be broken earth under them, care being taken that they should not rest firmly upon rocks or other hard substances, that will not allow them to settle.

All earth formations of this nature will settle some, and the sills must be permitted to go down as the rest of the structure settles, or a space for air would be left between the plank and the earth, and the sills would thus support the plank; whereas the plank should rest upon the earth at every point. Nothing is gained by wide or deep sills, and the whole support of the road is the earth that is covered by the plank, and the amount is in no wise increased by wide sills. The chief use of sills, is to grade by, and to keep the road in form until the earth has become settled.

There is in the vicinity of Toronto a short plank road, that has no sills at all under it, and the grade is very nearly as exact as in those roads where sills are used.

The plank having been laid, the next thing is to grade a road some ten or twelve feet wide on one side, and two or three on the other, by taking earth from the ditches on each side, and bringing it by a ditch scraper just up to, and even with the upper side of the plank, so that if a wheel runs off the track, it passes upon a smooth surface of earth. The ends of the plank should not be laid even, but a part should project from two to four inches by the general line, to prevent a rut being cut just along the ends of a plank. If the ends of the plank are even, and a small rut is made, the wheel of a loaded wagon will scrape along the ends for some distance before it will rise up to the top of the plank, unless the wagon moves in a direction nearly across the road; but if the wheel cannot move two feet forward with-

out coming square against the edge of a projecting plank, the difficulty of getting on the road is avoided. It is not necessary to pin or spike the plank to the sills.

Perfect drainage must be secured, and to that end, the ditches must be deep and wide, and good sluices wherever water crosses the road. This is the important point—*drain perfectly.*

The thickness of the plank must be decided by the amount of travel. If it is sufficient to insure the *wearing* out, and not the *rotting* out of the timber, four inches is the thickness; if that thickness is not justified by the travel, then three inches should be used, but not less. The kind of timber is, too, a point that must be controlled by circumstances. Pine is used at Toronto. Hemlock on the Salina road. In some of the western States it is likely that oak might be procured at a reasonable price. The number of feet—board measure—of lumber required for two sills four inches square, for one mile, is 14,080. Plank, three inches thick, for a single track eight feet wide, will measure 126,720 feet. The grading and laying a track, will vary in cost, according to circumstances. When an old road way is used, and hills are not to be cut down, or vallies filled up, it will not vary much from fifty cents a rod for one track.

In those sections of the country where lumber is cheap, plank roads must go into very general use; and in some localities, it is the only road that can be made to endure the changes of the climate with any reasonable outlay of money. Less power is required to draw loading over them, and they are superior in every respect to McAdam roads while they last.—*New York Agricultural Transactions.*

The Whole Secret of Growing Quinces.

We especially commend the following communication on Quinces, which we find in a late number of Downing's Horticulturist, to our readers. There is no question but the cultivation of this fruit is too much neglected in this vicinity for the farmers' profit. We never saw the quinces in market quite so fine as they were last autumn: and we well recollect the seemingly extravagant prices at which they were sold. We wish we could arouse our readers to a far more energetic movement, in relation to the growing of fruit. It takes time, it is true, but good selections can scarcely fail to yield handsome profits.—Ed.

Sir,—I will comply with your request to write down for the benefit of your readers my practice in cultivating the *Quince* tree. The commendations you are pleased to bestow on my plantation of this fruit tree, leads me to suppose that I may have struck out a mode better than is generally known or practised.

If so, "it ought," as you say, "to be a secret no longer." Indeed, I have had too many valuable hints from the pages of your journal, not to be willing to add my mite, should it be in my power, to the general stock of information.

I will begin, then, by saying that the great difference, which you have yourself noticed, between the growth and yield of my quince trees, and that of cultivators commonly, is, not that I have discovered a new mode of raising this valuable fruit. It is rather *that I cultivate my trees well*, and *most persons do not cultivate them at all.*

This sounds like a broad statement; but it is true. I have a neighbour who rides horticulture like a real hobby. His garden and orchard are filled with the hundreds of new pears, and other prodigies of the nurseries. I must do him the justice to say, that he grows these well. He told me last week that he had three hundred and forty sorts of pears in his collection! But would you believe it? the only quinces he has, are three trees, half starved, and thrust into an obscure quarter of his grounds, where they have neither been manured nor dug around, I dare say, for years! And thus he sends to me every year for some of my "handsome quinces," under the plea, that his soil does not suit them.

Believe me, the quince tree is a great sufferer from the common delusion that it is a *bush* that wants a damp and shady place; that it will not grow in a dry soil; and that it does not need any manure.

My theory and practice are based on the very opposite of these three propositions. My plantations, as you saw, are on a high and dry soil, in an open sunny exposure, and in ground kept thoroughly enriched.

I have arrived at this plan of culture by easy stages. Indeed, I have, at the present time, some rows of quinces, *indifferently planted* in the first place, in soil neither deepened nor duly manured beforehand. Of course, they bear only about half the crop of my later plantation, that has been better treated from the beginning.

The course I have now settled upon, which I may say has been attended with perfect success, is as follows: Premising that the quince will grow on any soil that will give good corn or potatoes, the first maxim is, that it should be well prepared before planting. This is done by the aid of that great earth regenerator, the subsoil plough. Two or three weeks, if possible, before the planting season, the land where the quince orchard is to be set, should be

broken up by a team of horses and a good plough, set so as to turn a clean furrow. Following this team comes the subsoil plough, drawn by a powerful pair of oxen. This breaks up and stirs the soil twice the usual depth. Most persons spread a coat of manure before ploughing. It is my practice to have it scattered along *in the bottom of each furrow*, from a light cart, which follows the subsoil plough. This places it at the bottom of my soil, which, *as it is a loamy one*, is the best place for it; because it enriches the poorest layer, and being always damp, it is, I conceive, always more soluble, and ready for the roots to take up, than when mixed with the top soil.

The soil, thoroughly ploughed and prepared, planting may commence. I prefer the *spring*, but I have often been equally successful in the *autumn*. But in either case, by all means, "take time by the forelock." Not later than the first of November, or the 10th of April, for the latitude of New York may, I think, be safely given as sound advice.

Dig your holes twice as large as the roots of the trees, and eighteen inches deep. Have, if possible, half a barrel full of good compost —stable manure and bog earth well mixed for three months previously,—for each tree. Shorten in the branches—one-half of the last year's growth—before you set the trees, and give the roots a good drenching with water before you cover them entirely with soil. Press the earth moderately about the roots, and leave the soil round the stem concave like a saucer, to catch the showers. In this way, if you lose one plant in a hundred, it will be an exception to my usual good luck.

In orchard plantation, I would recommend the quince tree to be put out in rows: the trees to be ten feet apart, and the rows to be twelve feet apart. This will be near enough in good soil, deep, and prepared as I have just described. You will be able to gather a good crop of fruit from such a plantation three years after it is made; and if it is well treated, it will continue in a productive state for *thirty years*. Such quinces as I have grown in this way will always command two cents a piece in the New York market, when those carelessly grown, are not worth half that sum; and I doubt if there is any much more certain and profitable orchard crop than the quince. I ought to observe, that for many years open spaces in the ground occupied by the quince orchard, may be cropped with potatoes, sugar beets, and the like, with profit and advantage to the trees themselves.

The annual treatment which I give my quince plantations, is, as nearly as possible, as follows: I prune my trees in the autumn, just after the fall of the leaf. This pruning consists in cutting out *as little as possible*, mainly old or decayed wood, or any branches that make the head too thick or unsightly.

In November I fork in around the roots of each tree, five or six shovelfuls of fresh stable manure. This dissolves in part by the autumn rains, and fills the soil with soluble matter ready for the first absorption by the young fibres in spring. When the spring opens, I have the ground ploughed between the rows, and lightly stirred beneath the trees. Directly after this, I give the whole a broadcast spread of salt, at the rate of ten bushels to the acre, or just a light coat sufficient to half conceal the ground under each tree. The cheapest and best salt for this purpose, is the refuse salt of the packing houses, to be had in all large cities where meat is packed for exportation.

I observe that one of your correspondents in Oneida county, has recommended salt for this tree in the last number of your journal. It is a good thing—I may say, the best thing for this fruit. I have used it now for five years, very plentifully, and can say with much confidence, that it is the *sine qua non* for the quince tree. Deep green foliage, thrifty growth, and large fair fruit, have, with me, invariably followed its judicious application. The quince and the plum will bear more of it than any other fruit tree; and provided there is sufficient strength in the soil—that is, provided manure is also given—it may be used every year with decided advantage. I have found by experience, two things: first, that necessary as manure is to the quince tree, yet common manure without salt will not give the very finest quinces; and second, that a poor soil will not bear heavy doses of salt without injury to vegetation.

Every tree has its insect. The only one worth notice, that infests the quince, is a little rascal, a sort of *Scolytus*, I believe, that kills the ends of the branches. The egg is deposited about midsummer. The next spring, the little grub which succeeds it, eats through to the pith of the branch, and cuts away the sap vessels just at the time—midsummer—when they are most wanted. Of course, the shoot above the insect withers and turns black. If this is "let alone," it will spread over your whole plantation. If, on the contrary, you give a little attention to it—say a few minutes every day, from the first day in June, that the dying shoots begin to show themselves, cutting off the limb six inches below where it is blackened, and burning up the trim-

mings immediately, you will gradually get rid of the whole brood.

If there is anything in this rather prolix account that is worth making public, it is at your service. I am, sir, your obedient servant. An Old Orchardist.

New York, July, 1847.

Wool.

The following statement, from the Springfield, Ill. Republic, gives a good account of the wool product of Clark county. The fault found in it, with the dirty manner in which Western wool is sent to market, is, we are sorry to say, well founded. We have frequently called the attention of our agricultural readers to this subject, and circulars have been sent out from large dealers in both eastern and western cities, representing the effect of burs, dirt, and bad handling, upon prices; but our western growers still prefer to lose 33⅓ per cent. from the price, to performing the additional labour of sending their wool to market clean.

Springfield, Aug. 4th, 1847.

Messrs. Gallagher & Crain,—At your request, we furnish you with the following statistical account, as near as can be ascertained, of the amount of wool grown in this county. The amount purchased by the different buyers are as follows:

Paist & Jones, South Charleston,	70,000
Bean & Griggs, Springfield,	60,000
Ira Paige, Springfield,	30,000
W. Pugsley, of Madison county,	10,000
Making in all,	170,000
Add to this surplus, say	30,000
	200,000

In the hands of the farmers for their own consumption, and you have 200,000 lbs. at 24½ cents per lb., which is the average cost of our own purchases, making the nice little sum of $49,000. So much for Clark.

If wool growers would give more attention to their sheep, and take that pride every farmer ought in preparing his clip for market, by having it *clean, free from burs, and well tied up*, instead of the *dirty and slovenly manner* in which the greater portion of *western* wool is brought to market, they would obtain from two to three cents more per pound for it, and help to redeem the *bad name* we have in our domestic and in the European wool markets.

It is a well known fact, that "Western American wool" is not sought for until the last resort in the English wool markets. They seek after German and Australian in preference, for no other reason than that our wool, *generally*, is burry, dirty, and badly handled.—*Enquirer.*

Terrace Cultivation in China.

The terrace cultivation of China has been noticed by nearly all the writers upon this country; and like most other subjects, it has been either much exaggerated, or under valued. It appeared to me to be carried to the greatest perfection on the hill-sides adjacent to the river Min, near Foochoofoo; at least I was more struck with it there than anywhere else. On sailing up that beautiful river, these terraces look like steps on the sides of the mountains, one rising above another, until they sometimes reach six or eight hundred feet above the level of the sea. When the rice and other crops are young, these terraces are clothed in luxuriant green, and look like a collection of gardens among the rugged and barren mountains. The terrace system is adopted by the Chinese, either for the purpose of supplying the hill-sides with water where paddy is to be grown, or to prevent the heavy rains from washing down the loose soil from the roots of other vegetables. Hence these cuttings are seen all over the sides of the hills, not exactly level like the rice terraces, but level enough to answer the purpose of checking the rains in their descent from the mountain. For the same reason, the sweet potatoe, and some other crops which are grown on the hills, are always planted in ridges which run cross-ways or horizontally; indeed, were the ridges made in a different direction, the heavy rains which fall in the early summer months would carry both the loose soil and crops down into the plains. Rice is grown on the lower terrace ground; and a stream of water is always led from some ravine, and made to flow across the sides of the hills, until it reaches the highest terrace, into which it flows and floods the whole of the level space. When the water rises three or four inches in height, which is sufficiently high for the rice, it finds vent at an opening made for the purpose in the bank, through which it flows into the terrace below, which it floods in the same manner, and so on to the lowest. In this way the whole of the rice terraces are kept continually flooded, until the stalks of the crops assume a yellow ripening hue, when the water being no longer required, it is turned back into its natural channel, or led to a different part of the hill, for the nourishment of other crops.—*Fortune's Wanderings in China.*

Frying.

Frying, as is properly observed by Dr. Kitchiner, is often a convenient mode of cookery; it may be performed by a fire which will not do for roasting or boiling, and by the introduction of the pan between the meat and the fire, things get more equally dressed.

Be very particular that your frying pan is perfectly clean before using it. Never use any oil, butter, lard, or drippings, which are not perfectly free from salt, and perfectly sweet and fresh. As frying is, in fact, boiling in oil fat, it is of the first importance that your fat should be clean, or it will spoil the look as well as the flavour, and salt will prevent the meat from browning.

Good oil is, perhaps, the best to fry in, but sweet fresh lard, or clarified mutton or beef suet, will answer every purpose, nearly, if not quite as well as the best oil or butter, and, what is of greater importance, at a much less expense. Nice clean dripping is almost as good as anything. After you have done frying preserve your fat, which, if not burnt, will do for three or four fryings; but fat in which fish has been fried will do for nothing else.

If your fat is not of a proper heat, your frying cannot be well done; this is, in short, the great secret in frying, which the young cook ought and must acquire. The frying pan must always be set over a sharp and clear fire, or otherwise the fat is too long before it becomes ready. When the fat has done hissing, or bubbling, that is, when it is still, you may be pretty sure that it is hot enough. It is a good way to try the heat of your fat, by throwing a little bit of bread into the pan; if it fries crisp, the fat is of the right heat—if it burns the bread, it is too hot.

When your things are well done, take care and drain all the fat from them *most thoroughly*, particularly those that have been fried in bread crumbs, &c.; if you do not, your cookery will be marred. Fried fish ought to be quite dry. This depends in a great measure upon the fat in which they are dressed being of a proper heat. If the fish are well done, and are well drained of the fat, they will become quite dry and crisp in a few minutes after they have been taken out of the pan. If this, however, should not be the case, and the fish on the contrary should be damp and wet, lay them on a soft cloth before the fire, turning them occasionally till they are dry. They will sometimes take ten or fifteen minutes drying.

In preparing bread crumbs in a considerable quantity, in order to save unbroken the crust, and preserving it fit for the table cut your loaf into three equal parts, that is, cut off the bottom and top crusts, and use the middle part or the crumb for your frying. The bread should be at least two days old. A good and cheap substitute for bread is oatmeal, which will cost, comparatively speaking, nothing.

It is scarcely necessary to refer the cook to our general remarks upon the above operation. Frying is preferred by many persons to broiling; and our own opinion is, that steaks, chops, &c., may be dressed with much more certainty and regularity by the former, than by the latter, method. But plenty of oil, butter, or sweet grease, must always be used, or the frying will be imperfect.—*Sanderson.*

Transplanting Fruit Trees in the Spring and Autumn.

By S. G. Perkins, Esq., Boston, Mass.

First prepare the ground where they are to be put, so that water will not remain on or near the roots. Examine the roots of the tree before planting, and *cut out* all rotten or defective roots, and *cut in* (shorted) all that are bruised or otherwise injured, to sound wood above the wound. Be careful not to plant too deep, as this may be fatal to your tree.

If the tree does not put out shoots in the spring, at the usual time, or as soon as others do that were planted at the same time, give it one good watering at the roots, and no more while it remains in a dormant state; but if the bark remains fresh, or does not turn black, *wash the head and body* with a watering pot or syringe every evening at sundown, until it begins to shoot or grow, when you may cease watering the head, and water the roots if required. I have had trees to remain until the last of July without putting out a leaf or shoot of any kind, and after that become as fine specimens as any in my garden.

No manure should be put to fruit trees, except it be a little vegetable manure, quite rotten, and that mixed with the earth that is to cover the roots. The question is frequently asked whether it be best to plant fruit trees in the spring or autumn. This, in this latitude, must depend on the *soil* into which they are to be put. If the soil be a wet, clayey one, it is best to plant in the spring; but if it be a light, gravelly soil, the autumn is preferable, because you gain four or five weeks in the growth of your plant in the spring.

If water be allowed to remain about the roots of trees that are recently planted, and

are not growing, it will probably rot them by becoming stagnant and putrid. Trees should be planted therefore, so that the water will run over and off the roots, which is all they require to afford them nourishment.

Watering the head and body of a tree that is tardy in putting forth its shoots, is the safest, and indeed the only sure mode of bringing them out, while a continued watering of the roots is almost sure destruction to them.

Trees planted on a south wall or fence, that do not put out shoots in due season, should be covered for several hours when the sun is out, if the weather be warm. The leaves may be considered a sort of suction pump, which draws up the moisture from its roots and produces its increased growth, whereas a tree without leaves, and that is not already attached to the ground, has no means of carrying off the moisture from the roots. For example, of two branches of equal size and weight, the one with leaves and the other without them, are placed in vessels containing an equal quantity of water, and exposed to the sun, the one having leaves will take up the greater part of the liquid, while the other will consume comparatively little.

Some ten years ago, I imported from Paris 210 pear trees on quince stocks, whose roots, on their arrival, I found to be entirely black and dead. I shaved off with a drawing knife all the roots down to the stump. These I planted in trenches, tying them to cross-bars to keep them firm, and then filled up the trench with good soil. The heads and bodies of these trees were regularly washed in dry weather until they began to sprout, which most of them did in abundance during the summer, and I finally saved out of the whole number, 174, which became as well rooted and as good trees as any in my garden.

This has happened more than once. Three or four years ago, I imported among other trees, twenty plum trees, from six to seven feet high, the heads of which had been budded the previous year in France. These buds had grown from nine to twelve inches long, and were perfectly fresh when they arrived; but the roots on examination were found entirely dead. Two of these I gave away. One was good for nothing, and the other seventeen I planted in my garden, having cut out all the roots that had fibres, they being entirely dead. One of my men said I might as well plant my walking-stick. Sixteen of these are now flourishing trees, well grown and well rooted, new roots being induced by means of washing the upper part of the tree.

Remarks.—The foregoing will please such of our readers as like plain, sensible advice, from a thoroughly practical man. We have ourselves seen with great surprise and satisfaction the trees referred to as having been so successfully transplanted by Mr. Perkins, under what were the most unfavourable circumstances. The great advantage of the mode he practices, of *watering the bark*, and not watering the roots of a tree, in a half dormant state, our correspondent thoroughly convinced us of in his own garden. Our readers are solicited to put in practice the invaluable advice he gives them. There is no doubt that half the trees that die annually from the ignorance of transplanters, perish from a mistaken notion of deluging their roots with water daily, when their fibres are so feeble as to dread it as much as a patient afflicted with the hydrophobia.—*Downing's Horticulturist.*

Sympathy of Birds.

A GENTLEMAN of our acquaintance, a week or two since, remarked an unusual collection of brown thrushes in a thicket contiguous to his residence. His attention having been drawn toward them for several successive days by their loud cries and eccentric movements, he was at length induced to investigate more closely the cause of this unwonted congress of his feathered tenants, and ascertain if possible the cause of their excitement. Upon examining the thicket he discovered a female thrush suspended by one wing to a limb. Near by was her nest containing several half grown birds.

From the attendant circumstance he immediately concluded, that the maternal bird must have become entangled before the process of incubation was completed, and that some kindly hearted neighbour had supplied her place in hatching and brooding her callow offspring. He withdrew a few rods and the committee of relief immediately resumed the self-imposed duty of administering "aid and comfort," in the form of worms and other insects, alternating between the mother and her young—she, meanwhile, cheering them on in their labour of love with the peculiar note which first led to the discovery of her situation.

Having watched this exhibition of charity for some half hour, our informant relieved the mother bird. She immediately flew to her nest, expressing her gratitude by her sweetest notes. Her charitable friends, their "occupation now being gone,"—as the police

report says—dispersed to their respective places of abode, singing as they went a song of joy.

The above statement may be relied upon in every particular. The many pleasing reflections which it suggests, we leave to be recorded by our friends abroad.—*New Haven Herald.*

To Cook Bacon, Ham, Tongues.

First, well wash and scrape clean. If very salt, it may soak in cold water a few hours; allow plenty of water, fresh rain or river water is best; put it in when the chill is off, and let it be a good while coming to the boil, then keep it very gently simmering. If time allows, throw away nearly or quite all the liquor of bacon as soon as it boils up, and renew it with fresh cold water; reckon the time from the second boiling. A pound of streaky bacon will require three-quarters of an hour to boil; a quarter of an hour for every additional pound. If good bacon it will swell in boiling, and when done the rind will pull off easily. Take it up on a common dish to remove the rind, and sprinkle it over with bread raspings, sifted through a flour dredge, or grater. A ham of twelve or fourteen pounds will require four or five hours simmering, or four hours baking in a moderate oven. When done, remove the skin as whole as possible, and preserve it to cover over the ham and keep it moist. If to be served hot, strew raspings as above; but if intended for eating cold, omit the raspings. It will be much the more juicy for not cutting hot. Set it on a baking stand, or some other contrivance, to keep it from touching the dish; this preserves it from swamping in the fat that drips from it, keeps the fat nice and white for use, and also makes the ham keep the longer from becoming mouldy, by the outside being perfectly dry. Whether hot or cold, garnish with parsley. A neat's tongue, according to its size, age, and freshness, will require from two hours and a half to four hours slow boiling. When done, it will stick tender, and the skin will peel off easily. A dried chine, or hog's cheek, may be allowed the same boiling as bacon, viz: four pounds an hour and a half, and a quarter of an hour for every additional pound.*—*Sanderson.*

Lightning Rods.

The wire suitable for lightning rods is that known as No. 0, or No. 1, Iron wire, six feet of it weigh about one pound, and is sold by Phelps, Dodge & Co., Cliff street, New York, at six cents per pound. This is the size of the wire used in the United States Navy for 74 gun ships. It has never been known to fail of conducting the lightning where the wire extended above the top of the mast and terminated in the water, nor have the hundreds of tons of metal in guns, chain-cables and anchors on board the ship, ever been known to divert the lightning from the wire. The protection of a factory from damage by lightning is very simple and the expense but little. A factory 100 feet long and 36 feet wide, should have four lightning wires, and rising a few feet above the highest point of the building and placed at equal distances apart, so that not more than 20 feet surface should extend in any direction from the rod. The rods should be pointed at the top, and terminate in water—if possible, even if the rod is made to diverge to reach such a termination—if water cannot be reached, let the rod terminate deep enough in the ground to reach permanent moisture. This brief direction will be found ample.

The rod in descending should not be brought in contact with the tin leaders, as is sometimes the case—for the tin leaders may divert the lightning by affording it a more acceptable conductor. Lightning possesses wonderful disconnecting powers and has a great fondness for bright metallic surfaces, and will pass over such in preference to any other where the various surfaces are in *actual* contact.—*Farmer & Mechanic.*

Cultivation of Onions.

John W. Proctor, Esq., of Massachusetts, states in the Boston Cultivator, that there are three individuals in his neighbourhood, each of whom produces annually from two thousand to three thousand bushels of onions. They, in some instances, rent the land at $6 to $10 per acre, and the average product is three hundred bushels per acre. He says the onions, when ready for market, are worth $100 more than the rent of the land and the cost of the manure, leaving this sum as the compensation of the labour applied. He does not give the price of the onions per bushel, but we have lately seen it stated that the average in this neighbourhood is 37½ cents a bushel. The same land is continued in onions several years in succession. Mr. P. states, that some lots have borne this crop every year for ten years, without any depreciation in yield. "Muscle bed" and leached ashes are much used for manure. Great pains are taken in the pre-

* Our cooks are apt to boil a ham, or indeed bacon of any kind, too fast.—Ed.

paration of the soil, particularly to have the top well pulverized. The seed is sown with great accuracy by a machine, and strict attention is given to keeping the crop clear of weeds. It is calculated that one man and two boys of the ages of twelve to sixteen years will manage ten acres. Mr. P. says he knows of several individuals who commenced this business at the age of twenty-one, and have pursued it up for a dozen years or more, have brought up respectable families, and are now worth comfortable estates.

For the Farmers' Cabinet.

Nutrition of Superfine Flour, or Whole Meal.

To the Editor,—I lately came across the following remarks and calculations of Professor Johnston, and they seemed to me so practical, and to every day purpose, that I forward them to the Cabinet. But perhaps the Editor will exclaim, What! "book eating!" why the very idea of that will frighten our readers more than "book farming." Perhaps it may do so. No doubt many will put the article aside, and conclude that their stomachs and their fathers' were as wise without chemistry as the Professor's is, in the midst of his laboratory. Still facts are stubborn things, and we all know, who have been so unfortunate as to be dyspeptic ourselves, or to have friends who were, that "bran" bread does suit weak digestive powers, and I am apt to conclude, if the Doctor's scales and tests have been right, that there must be something in the results worth looking into. N.

"I propose to show, in an intelligible manner, that whole meal flour is really more nourishing, as well as more wholesome, than fine white flour, as food for man.

"The solid parts of the human body consist, principally, of three several portions: the fat, the muscle, and the bone. These three substances are liable to constant waste in the living body, and therefore must be constantly renewed from the food that we eat. The vegetable food that we consume contains these three substances almost ready formed. The plant is the brickmaker. The animal voluntarily introduces these bricks into its stomach, and then involuntarily—through the operation of the mysterious machinery within—picks out these bricks, transports them to different parts of the body, and builds them into their appropriate places. As the miller at his mill throws into the hopper the unground grain, and forthwith by the involuntary movements of the machinery, receives in his several sacks his fine flour, the seconds, the middlings, the pollard, and the bran; so in the human body, by a still more refined separation, the fat is extracted and deposited here, the muscular matter there, and the bony material in a third locality, where it can not only be stored up, but where its presence is actually at the moment necessary.

Again, the fluid parts of the body contain the same substances in a liquid form, on their way to or from the several parts of the body in which they are required. They include also a portion of salt or saline matter which is dissolved in them, as we dissolve common salt in our soup, or Epsom salts in the pleasant draughts with which our doctors delight to vex us. This saline matter is also obtained from the food.

Now it is self-evident, that that food must be the most nourishing which supplies all the ingredients of the body most abundantly on the whole, or in proportion most suited to the actual wants of the individual animal to which it is given.

How stands the question, then, in regard to this point between the brown bread and the white—the fine flour and the whole meal of wheat?

The grain of wheat consists of two parts, with which the miller is familiar—the inner grain and the skin that covers it. The inner grain gives the pure white flour; the skin, when separated, forms the bran. The miller cannot entirely peel off the skin from his grain, and thus some of it is unavoidably ground up with his flour. By sifting, he separates it more or less completely—his seconds, middlings, &c., owing their colour to the proportion of brown bran that has passed through the sieve along with the flour. The whole meal, as it is called, of which the so-named brown *household bread* is made, consists of the entire grain ground up together—used as it comes from the millstones unsifted, and therefore containing all the bran.

The first white flour, therefore, may be said to contain no bran, while the whole meal contains all that grew naturally upon the grain.

What is the composition of these two portions of the seed? How much do they respectively contain of the several constituents of the animal body? How much of each is contained also in the whole grain?

1. *The fat.* Of this ingredient a thousand pounds of the

Whole grain contain		28 lbs.
Fine flour	"	20 "
Bran	"	60 "

So that the bran is much richer in fat than

the interior part of the grain, and the whole grain ground together—whole meal—richer than the finer part of the flour in the proportion of nearly one half.

2. *The muscular matter.* I have had no opportunity as yet of ascertaining the relative proportions of this ingredient in the bran and fine flour of the same sample of grain. Numerous experiments, however, have been made in my laboratory, to determine these proportions in the flour and whole seed of several varieties of grain. The general result of these is, that the whole grain uniformly contains a larger quantity, weight for weight, than the fine flour extracted from it does. The particular results in the case of wheat and Indian corn were as follow: A thousand pounds of the whole grain and of the fine flour contained of muscular matter respectively,

	Whole grain.	*Fine flour.*
Wheat,	156 lbs.	130 lbs.
Indian corn,	140 "	110 "

Of the material out of which the animal muscle is to be formed, the whole meal or grain of wheat contains one-fifth more than the finest flour does. For maintaining muscular strength, therefore, it must be more valuable in an equal proportion.

2. *Bone material and saline matter.* Of these mineral constituents, as they may be called, of the animal body, a thousand pounds of bran, whole meal and fine flour, contain respectively,

Bran,	700 lbs.
Whole meal,	170 "
Fine flour,	60 "

So that in regard to this important part of our food, necessary to all living animals, but especially to the young who are growing, and to the mother who is giving milk—the whole meal is three times more nourishing than the fine flour.

Our case is now made out. Weight for weight, the whole grain or meal is more rich in all these three essential elements of a nutritive food, than the fine flour of wheat. By those whose only desire is to sustain their health and strength by the food they eat, ought not the whole meal to be preferred? To children who are rapidly growing, the browner the bread they eat, the more abundant the supply of the material from which their increasing bones and muscles are to be produced. To the milk-giving mother, the same food, and for a similar reason, is the most appropriate.

A glance at their mutual relations in regard to the three substances, presented in one view, will show this more clearly. A thousand pounds of each contain of the three several ingredients the following proportions:

	Whole meal.	*Fine flour.*
Muscular matter,	156 lbs.	130 lbs.
Bone material,	170	60
Fat,	28	20
Total in each,	354	210

Taking the three ingredients, therefore, together, the whole meal is one-half more valuable for fulfilling all the purposes of nutrition than the fine flour—and especially so in regard to the feeding of the young, the pregnant, and those who undergo much bodily fatigue.

It will not be denied that it is for a wise purpose that the Deity has so intimately associated, in the grain, the several substances which are necessary for the complete nutrition of animal bodies. The above considerations show how unwise we are in attempting to undo this natural collocation of materials. To please the eye and the palate, we sift out a less generally nutritious food; and, to make up for what we have removed, experience teaches us to have recourse to animal food of various descriptions.

For the Farmers' Cabinet.

Marl on Worn-out Lands.

It is delightful to read accounts like the following, of worn-out and impoverished lands being brought finely into clover, by so simple a means as the application of marl, bountifully provided by nature, in the vicinity, and only waiting the application of a little labour and enterprise, to turn the sterile, into the fruitful spot, and afford to the experimenter one of the most gratifying sensations—that of changing the very face of nature, and multiplying an hundred, or even five hundred times, his blades of grass. Any one who was acquainted with many parts of Burlington, Gloucester and Salem counties, in New Jersey, thirty years ago, and compares their productiveness then with that of the present day, may, we think, not despair of seeing the average crop of wheat one day in our country, something like 30 or even 40 bushels per acre. The Editor of the Cabinet may, perhaps, think the following letter, which I find in the *Agriculturist*, of sufficient interest to appear in his own columns. If so, he will gratify M.

"I have for many years been occasionally engaged in making experiments, designed to bring to light the best method of restoring to profitable culture, lands that are clothed with that unerring badge of pover-

ty, the broom-grass. The result of the following experiment in applying marl to such land, is now made public for the benefit of persons possessing worn-out lands, near deposits of this valuable manure.

"The impression has hitherto generally prevailed, that the application of marl to poor lands must be limited by the progress of cultivation, and that it could not exert much of its fertilizing power, if applied to such lands without cultivation. This, I think, is an error, as will be clearly shown by the result of the experiment which I will proceed to detail.

"In the month of February, 1846, five hundred bushels of blue or green sand marl were scattered on a measured acre of land which was covered with a growth of broom-grass, known to be alike the badge of poverty, and the memorial of maltreatment in bygone days.

"On this land, in March following, three gallons of red clover seed were scattered, and in the month of June, 1846, the clover was found to be in a thriving condition, bunches of it having reached the height of 28 inches in less than three months after the seed were sown. And now—June 12th, 1847—it has complete possession of the soil, and after having been much injured by a long and severe drought, that portion of it that has gone to bloom is from 15 to 20 inches high. As I did not wish my first experiment to prove abortive from drought, I used nearly double as much seed as would, under ordinary circumstances, be requisite. Two gallons to the acre would be an abundance. This land has not had the plough, hoe, or spade, to operate on it for nearly twenty years. Now it seems to me that the result of this experiment shows conclusively, that lands similar to this, which are abundant in Eastern Virginia, having a supply of blue marl near them, may be converted into rich grazing lands, without subjecting them to a previous succession of cleansing crops, and thus the farmer could make ample provision for his cattle and other animals, without grazing lands devoted to wheat, corn, &c.

"The cost of restoring such land as that mentioned above to fertility, by marling and applying clover seed, would be from five to seven dollars per acre, and this cannot be considered "paying too dear for the whistle," when it is recollected that the land, after the process, would be cheaper at thirty dollars per acre, than it would be at two dollars, if left in its previous impoverished condition. In the last mentioned state, it would bring the cultivator in debt; but when improved, it would not only yield enough to meet the expense of cultivating and securing the crops, but would also pay a handsome profit in the investment if valued at thirty dollars per acre.

"The land on which this experiment was made is hilly, with a southwestern aspect. I have another acre of clover on a hill with a northwestern aspect, which will come to maturity in June, 1848; and as many would regard a luxuriant growth of red clover, produced on such a soil without previous cultivation, as the eighth wonder of the world, I now invite all who feel interested in the matter, to visit Potomac Church about the middle of June, 1848.

"This land lies about half a mile distant from the Richmond, Fredericksburgh, and Potomac railroad, six miles from Fredericksburgh, five miles from Aquia creek, and within six hours' travel of Richmond, Va., by railroad; and five hours from Washington by railroad and steamboat. In this region the blue marl abounds, and lands capable of rapid improvement by its use, can now be purchased at moderate prices. If any of our northern friends are on the eve of departing for Oregon or California, it would be well for them to give this part of Virginia an examination before they pull up stakes and bid a final adieu to their native homes.

There is another consideration which should operate as an inducement to bring emigrants to this region.

A work is now progressing on the Rappahannock river, that will, it is supposed, at no distant period, bring into profitable use the extensive water power of the Rappahannock, which would result in a large addition to the business and population of Fredericksburgh. In that event the unoccupied land in the vicinity of Fredericksburgh, which can now be purchased at low prices, will advance in price from one hundred to three hundred per cent. The prospective value of western lands is inducing thousands to go thither, encountering the diseases and other hardships incident to unsettled regions; and as there exists a reasonable prospect that lands in this part of Virginia will ere long be greatly enhanced in value, this consideration should operate here with much greater force, because of the advantages arising from the nearness of good markets for the products of the soil, convenient access to means of education, &c. If persons desirous of examining lands in this part of Virginia, will call on me at Fredericksburgh, I will with pleasure render them all the aid in my power.

Layton Y. Atkins.

Fredericksburgh, Va., June, 1847.

Committees of Agricultural Society.

At a meeting of the Committee of Arrangement of the Philadelphia Society for promoting Agriculture, held on the 1st instant, the following named gentlemen were appointed to act as judges on the various committees, at the Exhibition to be held on the 14th and 15th of October next, at the Lamb tavern, on the Lancaster turnpike.

On Horses.—Dr. A. L. Elwyn, Chairman; Jacob Peters, James Jeanette, Capt. J. Babington, James Torbert, and Joseph French.

Cattle over two years old.—Thomas S. Woodward, Chairman; Benjamin Serrill, David George, Garrett Williamson, John Hibberd.

Cattle under two years old.—Joseph Crawford, Chairman; John M. George, W. W. Roberts, John Johnson, Samuel Cooper.

On Sheep or Swine.—John Lardner, Chairman; David Whitall, John Worth, jr., John James.

On Butter and Poultry.—C. S. Smith, Chairman; Asher Moore, George Blight, James McPherson, Homer Eachus.

On Implements and Produce.—Morris Longstreth, Esq., Chairman; Samuel Williams, Jesse George, Thomas S. Davis, Samuel H. Dager, Dr. G. Emerson, Dr. Hare.

On Ploughs and Ploughing.—Samuel Williams, Chairman; S. S. Richie, Garrett Williamson, Isaac Newton, Joseph George, John Hunter, Aaron Clement.

Aaron Clement, *Sec'ry.*

Philadelphia, Sept. 2nd, 1847.

For the Farmers' Cabinet.

Nurseries.

The greatest defect of nurserymen in general, particularly in the West, is the number of kinds they cultivate. Few persons in that business cultivate less than one to two hundred kinds of apples, and to a less extent in other fruit; which is a great loss to the community. I would ask why cultivate so many? There are but twelve months in the year—some of the choice kinds last two months and more. Then why raise a second or third-rate fruit, when the labour of altering is the same or nearly so? The different tastes of men do not vary so much. I am answered by some, that all these different kinds are called for; and they may be, by many who have known no better fruit; but give of the fruit of each kind, and their decision will agree. At Wheeling, some years since a committee of fruit men met every month and made decision of the best kinds of fruit exhibited for that month—this was a good plan. In the absence of such committee, take apples to suitable companies at different times, and by their decision arrange the fruit, confining the number to ten or twelve kinds of apples. The different nurserymen, by communicating their favourite fruit, those acquainted with that fruit will know if they have a better. I will commence with two—the Golden Gate and French Pippin. T.

Fallston, Pa.

For the Farmers' Cabinet.

Grape.

The grape is of the most simple and easy cultivation; once give it a start and it will take care of itself. Some years since I planted two vines at opposite corners of my house. After one year's growth, I directed one branch up the house and carried others under ground to the next desirable situation, between windows, and tacked the end up, and in a few years I had the sides of my house covered, and barrels of fruit of the choicest kinds. They generally ripen sooner on the house than on trees or arbours, and on the south-west first, south-east next, north-west last, having a succession from early to late. Some years since there was plenty on the house when those in gardens were killed. If too much trouble to tack up the vine on the house, plant a few and start them up trees, and in a few years they will produce largely without even pruning. Do not omit to leave some sprouts near the ground, and the following spring put part under ground leaving the end out, and in one year it will take root; if two to four joints are put under, it may, when taken up, be cut in two, and thus supply neighbours who want them. This mode of increasing grape vines takes very little trouble, and is as certain to grow as the parent stock. The plan of letting them run on trees, is by no means objectionable. The Isabellas *this year* are ripening as fast on trees as elsewhere, and large and full on the vine. If it be desirable to increase the number of vines, instead of laying down as mentioned above, take a long sprout from the root of the growth of the preceding year, dig a ditch six inches deep the length of the vine, laying the dirt on each side if level, if side hill, put the dirt on the upper side, to keep rain from filling it up too soon; fasten the vine in the bottom of this ditch, leaving it uncovered until the sprouts from each joint raise a foot or more, when the vine may be loosely covered with earth, and by rubbing off the ends of those growing too fast, a root may be raised from every bud or joint.

Large vines may be greatly improved in

some situations by laying down the main vine under ground six inches, say from three to ten feet or more, and bring the top nearer the ground, and in an open space or on a different tree, it improves the fruit the same year if done early.

These hints are given not to induce neglect of proper culture, but to induce farmers—who always have enough to do when such ought to be done—to plant and protect one year. Hundreds of farmers west, and many east, have not a vine on their farm; when, for the amount of labour and cost, I know of nothing that so much contributes to the comfort of their family and friends. A.

Reclaimed Swamp.

T. K. D'Wolf's Statement.—The piece of land I offer for premium contains twelve acres and nine rods. To describe its appearance at the time I purchased, 1838, is impossible—full of bushes, large pine stumps, old logs, roots, bogs and brakes, mire holes and deep pits, swarms of frogs, serpents and lizards,—it was literally a den of "creeping things." One man in Chester—a poor man—had opened the door to this bedlam, and for many years, had the entire control of the wild grass, which he carried out on poles, and paid annually $3. This lot lies concave. The depression, or swampy portion, contains about six acres; its sides or upland were full of knolls and depressions, with briars, bushes, old logs and large stones—boulders—the most of them so large that they could not be removed without blasting, and some from eight to ten feet in diameter.

In the summer of 1839, I employed two Irishmen, and commenced ditching. I put a large centre ditch from north to south, and cross ditches from the centre, east and west, to the more elevated portions. The muck, in some portions of the centre ditch, is from six to eight feet deep, and gradually lessens as it approaches the upland. The bottom is a blue clay and white sand. After cutting the centre ditch, I employed four men with scythes, bush-hooks and axes, to cut off the grass and bushes, requiring them to put all the bushes into heaps, and the grass was taken off on poles, equal to two tons of good hay. The expense of cutting and piling the brush, and getting the hay, was forty-five days' work, for which I paid $45. After my cross-ditches were cut, I set fire to the heaps of brush, and in less than two hours the whole lot presented one black, smoking surface, and for the first time, probably, within the knowledge of man, it was thrown open to the full influence of the sun.

How it was possible, with any means I possessed, to remove the hundreds of stumps—and most of them large pine—the countless number of old logs, to fill up the great cavities, to remove the bogs, to dispose of the great rocks upon the upland, I could not conceive. It had always been a principle with me never to look back; but then, this enterprise had been undertaken against the advice of some of my best friends; first, because it was impracticable, and secondly, because, from my early youth, I had not been engaged in agricultural pursuits, and must be ignorant, of course, of the best manner of conducting the business. I was resolved, however, to go ahead, and this was one of the best resolutions of my life. As I moved forward, I soon found these mountains were molehills, and that many of these "insurmountables" were the exact materials I wanted in the completion of my object. The rocks and small stones upon the upland would make me a bold and durable fence, the bogs would fill up the mire holes in the mucky portions, and also the cavities in the upland, after removing the smaller rocks. The large amount of muck thrown from the ditches was just the thing for the upland, giving me an abundance of manure. The pine stumps and logs furnished a good quality of stove wood, for which I had been paying $1 50 and $2 per cord, and most of all, my friends had become convinced of the practicability of the operation, and that, too, in my hands.

The lot now presents a smooth surface, with the exception of some large stones on the upland. Every rod in the lot can be ploughed with an ox team. Most of the upland has been ploughed and cultivated with crops of wheat, corn, oats and potatoes. More than two-thirds of the mucky portion has been ploughed, made clean as a garden, cultivated with potatoes and oats, and seeded with herd's grass and clover. In seeding these portions, I am in the habit of giving a liberal top-dressing of horse manure—which, I believe, is preferable—say twenty-five cart loads to the acre, mixing it well by thorough harrowing. The portions which have not been ploughed have a smooth surface, and give me from one to two tons per acre of good stock hay, foul meadow, blue joint, and a tall native grass which resembles very much a large growth of red-top. I have been in the habit of taking up every year more or less for potatoes, with a view to clean the land, and the next season would put on oats and seed down. In seeding with oats, I have invariably lost much of my crop from the great growth of straw, being down and not well filled. The last year I adopted

the "new system" from the Massachusetts Ploughman, and in the month of August, after taking off the usual amount of the grass I have described, I took up a piece by ploughing and dragging thoroughly, cleaned it, gave the top-dressing, put in the seed—timothy and red-top—say a half bushel of the former to three pecks of the latter, and the present season I took from it the best crop of grass I ever saw. I intend, therefore, to complete my job in that way, the object being to clean the land and change the quality of the grass.

I opened an account with my lot when I commenced, charging every day's work, every load of manure, every bushel of seed, &c. I gave credit, as I passed along, for all the crops I took from it, including wood, &c.; and at the end of four years, it had paid principal and interest of the amount expended—over $300—and brought me in debt about $15. Since that time, I have made no estimate of the expense or profits, until the present season, and now only with a view to this statement.

The net profits of my lot, then, the present season, are as follows:

25 tons of hay at $8 per ton,		$200
Deduct 16 days' labour at $1 per day,	$16	
" " boy, 50 c. per day,	8	
" 32 days' board at $1 50 per week,	7	
" use of oxen and tools,	2	
	—	33
Net balance,		$167

Abstract of Ag. Returns.

Chester, Mass., October 8th, 1846.

Pickles.

The time of year is now approaching when all "good housewives" will be anxious to see their pickle pans filled, and as there is a variety of articles used for this purpose, we have concluded to present a few remarks relative to the manner of preserving them. Among the most highly esteemed, we may mention the *Mango pickle.* This is formed by immersing green muskmelons in a solution of salt in water for the space of eight days, taking out the seeds, filling the interior with unground mustard, horse-radish, cut fine, allspice, and small onions. The melons should then be immediately sewed together and scalded in sharp vinegar, or placed in a jar where vinegar heated to the boiling point can be poured over them.

Walnuts are pickled in the following manner: As soon as they become so ripe as to admit of their being easily perforated with a pin, they are fit for pickling. Having gathered your nuts, soak them for ten or fourteen days in very cold and strong brine which has been boiled and skimmed. Into a quantity of vinegar, sufficient to cover them, put whole pepper, mustard seed, cloves, small onions, garlic, ginger and horseradish; this should be boiled and poured over the walnuts when cold. From two to three months are necessary to pickle the walnut, and when properly prepared, they are excellent and esteemed by most.

Peppers.—Peppers for pickling should be taken from the vines as soon as they have attained their maturity of growth, but before they are ripe. They should then be immediately immersed in salt water and suffered to remain until they begin to turn yellow. They should then be removed, and "greened" by immersing them in warm salt and water, shifting them every two or three days. This done, remove them to a suitable vessel—an earthen crock or jar is best—and pour over them boiling vinegar. If a small bag of mustard seed be deposited in the vessel, it will be found a great improvement.

Cucumbers ought to be pickled while perfectly green, and of small size, and should lie in weak brine from six to eight days. They should then be removed, and after being carefully washed, placed in a wooden vessel and kept in a warm place for a day or two, and then removed to the jar or crock and have as much vinegar, scalded with pepper, allspice, flagroot and mustard seed as will fill the vessel, poured over them. You may, in order to "green" them, throw in a small lump of alum, which will also harden them. Some boil their pickles in brass or copper kettles, but these metals, when acted on by a powerful acid, like vinegar, are not wholesome, and ought not, therefore, to be used.

Red Cabbages.—In the preparation of this vegetable for pickling, nothing more is necessary than to cut the heads from the stumps when grown, and to pour over them spiced vinegar, which has been previously boiled and skimmed, and suffering them to remain immersed for ten or twelve days before using. Some prefer immersing the heads in brine for twenty or twenty-four hours before turning in the vinegar, as they suppose it improves the flavor, and causes them to keep more perfectly. Where good vinegar is used, pickles will rarely grow soft or insipid, but if the vinegar is of a poor quality, or has suffered deterioration from any cause, or if the spices used to give flavor, are introduced without judgment, the reverse is often the case. When this takes place, no

time should be lost in decanting the vinegar, and replenishing the vessel with a fresh supply, scalding hot, in which horse-radish, allspice, ginger and a little alum have been thrown. If managed in this way, there is but little danger of failure, and the pickles, besides being regenerated, will keep for years perfectly sweet and unimpaired.

Nasturtions.—These require to be kept several days after they are taken from the plants, and then covered with boiling vinegar, in which they should remain until perfectly cold. They should then be carefully bottled and corked. In three months they may be brought to the table. Nasturtions make an excellent pickle, and should be cultivated in every garden whether large or small.

Artichokes.—This root makes a very good pickle. They should be taken from the ground while green, and put immediately into strong vinegar. No previous preparation is required.—*Olive Branch.*

Malaga Raisin Vineyards.

At daybreak this morning, a gentleman, whom Mr. Kirkpatrick requested to show me his vineyard, and explain the process of preserving grapes, waited upon me, and we set out immediately. Our road lay along the shore to the eastward, the vineyard of Don Salvador Solier lying in that direction, at the distance of about fourteen miles. In the immediate vicinity of Malaga, the country is extremely rugged, but every patch where it was possible to thrust in a plant was under cultivation. The rocks consisted of rugged masses of limestone, alternating with the same kind of slaty schist I had previously observed on the road from Antequera. For the first two leagues there were few vineyards, chiefly owing to the ruggedness of the country, which would not admit of cultivation. Beyond that distance almost every hill was covered with vines, the produce of which is all converted into raisins. The grapes are all of the large white Muscatel—the Muscatel Gordo of Roxas Clemente. This grape, my companion informed me, does not succeed in the interior, and therefore, all the Muscatel raisins are made within two leagues of the coast. The Lexia raisins, which are used for puddings, &c., are made in the interior. We arrived at the country house of Don Salvador at nine o'clock, and after a substantial breakfast, sallied out to examine the vines. Six or seven workmen were employed in preparing the ground for planting, within a short distance of the house. They did not trench the whole of the ground, but dug out square holes, about two feet in diameter, and not more than twenty inches in depth. The distance of the centres of these holes from each other is seven feet, and this is the distance at which the vines on the hills round Malaga seem invariably to be planted. The vineyard I was examining, as well as all those in its vicinity, consisted of a series of steep hills. The soil everywhere was a decomposed slate, mixed with abundance of gravel of the same substance. On the higher part of the ground, this soil appeared rather hard and required great labour to break it up, but once broken up it is loose forever; so much so that it slides away from under the feet even where there is only a slight slope. There is no difference made in the distance at which the vines are planted, between the hills and the valleys; although in many places on the former, the shoots scarcely extend more than ten or twelve inches, while in the valleys they extend to the length of as many feet. They never, under any circumstances, manure these vineyards; they say it would give more wood but would not add to the quantity of the fruit. The branches are pruned closer to the stock than those of any vines I ever saw; nothing but the half-formed buds, at the junction of the old and new wood, being left to produce the wood of the succeeding year. I could not find an instance where the spur had been left long enough to include the first full-formed bud, which is generally from half an inch to an inch from the junction. The number of shoots seemed almost unlimited; I counted from ten to twenty-two; there was scarcely any vine had fewer than ten, and they generally had from twelve to fifteen. The stock was close to the ground, and not the slightest effort made to raise the shoots, or support them from the ground. Almost every bunch would, therefore, lie on the ground; and were the soil of a less gravelly description, the greater part would, without doubt, be lost. After the pruning they dig over the ground and lay bare the stock, in order to scrape off the barbe, or small thread-like roots which are near the surface. As scarcely any grass or herb vegetates among these vines, and the soil is always sufficiently loose, it is evident that they require little digging or cleaning. We went out to visit a peasant, a neighbour of Don Salvador's. He said four or five very fine vines might yield raisins enough to fill a box which contains an arroba of 25 lbs.; but throughout the country it would require, on an average, nine or ten. The grapes lose about two-thirds of their weight in drying; this would,

therefore, give a produce of seven or eight pounds of grapes to each vine—a calculation which I should think must include a much greater proportion of stinted vines than of luxuriant ones; for the majority of those in Don Salvador's vineyard would, I have no doubt, yield double that quantity. Including, however, those vines which are visible at the tops even of the highest hills, the calculation is likely enough to be correct. The grapes, when dried, are worth double what they would yield made into wine, unless spoiled by the rain.

They usually commence gathering the grapes about the middle of August, choosing only such bunches as are ripe. They return after a week or two to make another selection, and so on for a third and fourth time. A place is always reserved in the vineyard, free from plants, on which to spread the grapes when gathered; and they choose a spot where the soil is of the darkest colour, in order to its keeping the full force of the sun's rays during the day, and retaining the heat during the night. The bunches are spread out separately on the ground, and never allowed to press upon each other: according to Don Salvador, they are only once turned over. At the end of fifteen days they are, in general, sufficiently dry. This season was more unfortunate for the early commencement of the rains, than any season for many years, and the crop was remarkably fine. It is Don Salvador's intention in future years, to have wooden toldos, or awnings, prepared to shelter the grapes, while drying, against the rains, and also to cover them during the night. He says that the drying of the grapes is so much retarded by their being exposed to the dews during the night, that when he has the means of covering them at night, he expects they will be dried in half the time usual at present. Before the bunches are spread out, the small grapes are picked out, as well as any which may happen to be injured; the small grapes are dried separately. I saw a heap of them in Don Salvador's house, which had the appearance of very large currants. When the grapes are turned, any spoiled ones are, or ought to be picked out; they have no particular rule for judging when they are sufficiently dry—it is learnt by experience. When they happen to get rain while drying, the stalks become black or rusty looking, instead of being of a bright light brown. According to Don Salvador, the district which produces the Muscatel grape extends only two leagues further east; that is, not more than three leagues in all, along the coast, and two leagues inwards. He says the value of the land planted with it is about 3,000 rials, or 150 Spanish dollars per fanega.—*Busby's Vineyards of France and Spain.*

The Advantages of having Field-work always in a Forward State.

THE farmer who "takes time by the foretop" and drives his business, enjoys a kind of independence which he never can feel, whose business drives him. The winter is approaching, when if it be improved, much, very much may be accomplished to forward the spring operations. The following observations are to the point, and various useful hints may be taken from them, to accelerate the ofttimes hurried claims of early spring. They are taken from *Stephens' Book of the Farm.*—ED.

"Who breakesh timely his fallow or ley,
Sets forward his husbandrie many a waye.
This, timely well ended, doth forwardly bring
Not only thy tillage, but all other thing."

TUSSER.

THE season—*early spring*—having arrived when the labouring and sowing land for the various crops cultivated on a farm of mixed husbandry are about to occupy all hands for several months to come, the injunction of old Tusser to undertake them in time, that each may be finished in its proper season, should be regarded as a sound advice; for whenever your field labour is advanced ever so little at every opportunity of weather and leisure, no premature approach of the ensuing season can come upon you unawares; and should the season, on the other hand, be delayed beyond its usual period by natural causes, you will be *ready* to proceed with your work whenever the weather proves favourable. When work advances little by little, there is time to do it effectually; or, if it be not then executed in an effectual manner, you have yourself to blame for not looking after it. When I say, however, that work may be advanced little by little, I do not mean that it should be done in a slow, careless manner, as if the workpeople were unimpressed with the importance of what they were doing. The advantage of doing even a little is that whatever is done is not to do afterward; and that a little may be done as *well*, and in as short a time, as if it had been done as a part of a great operation. In this way, even if only one man is kept constantly at the plough, he would turn over, in the course of a time considered short when looked back upon, an extent of ground almost incredible. He will turn over an imperial acre a day, that is, six acres a week, twenty-four acres in a month, and seventy-two acres in the course of the dark and short days of the winter quarter. All this he will accomplish on the supposition that he has been enabled to go at his

plough every working day; but as that cannot probably happen in the winter quarter, suppose he turns over fifty acres instead of seventy-two, these will still comprehend the ploughing of the whole extent of ground allotted to be worked every year by each pair of horses when the farm was taken. In fact, here is a large proportion of a whole year's ploughing done in a single, and in the shortest quarter of the year.

Now, a week or two may quickly pass in winter in doing things of little moment, and which, in fact, amount to time being thrown away; such as sending away a rake of all the draughts to a stock corn market, on a day when there is little prospect of disposing of the grain, and when they would have been better employed at home at the plough; or driving some material on the farm which would better and easier be done when the ploughs are laid idle at any rate by frost; or in setting men to the corn-barn to thresh or clean corn, and laying the horses idle for the time; or in contriving some unimportant work to fill up the time for half a day, until the frost thaws a little on the lea, because it would give too much trouble to take the ploughs from the lea to the stubble field, if there be any such at the time. Sharpening and setting irons differently may form a reasonable excuse for shifting the ploughs from a stubble to a lea field, but no such excuse is available in neglecting to make the opposite transference. Such omissions and instances of misdirected labour are too much regarded as trifles *in winter;* but is undeniable that they occupy as much *time* as more important work; and in a season, too, when every operation of the field is preparatory to one at a more busy season. Occasionally the state of the work will force the consideration on the farmer, that it is not so far advanced as it should be, or even as he could wish; still, instead of pursuing a different course from that which has given rise to the reflection occasioned by the delay, his unsatisfied mind consoles itself with the assurance that when the season for active work actually arrives, the people will be able to make up for the lost time. This is, however, mere delusion; for if work can be made up, so can *time*, the two being inseparable; and yet how can lost time be made up, when every moment of the year has its work to perform, and when that period, long as it is, is usually found too short in which to do *everything* as it *ought to be done?* "There's the rub." For time eludes pursuit, and brooks no interruption; but neglected *work*, though *attempted* to be overtaken—and *it* may be overtaken before its issue—still the race will never terminate *in a satisfactory manner.* The neglected work may, no doubt, be done in a short time—in an unprecedentedly short time; but in that case, it is the time in which the work is done that is boasted of, not the work itself—the measure, and not the thing measured, which is held up to view; and yet, time being the standard by which all well-executed labour is measured, it cannot be deprived of that property, whatever devices may be used to make it go beyond its steady pace. You should remember that *its* pace is the same in winter as in summer, and the extent of labour, measured by the length of its tread, ought to be as great in winter as in summer, otherwise an irreclaimable error is assuredly committed in that season.

Convinced that *field*-labour should be perseveringly advanced in winter, whenever practicable, I am of opinion that plan is good which appoints ploughmen to different departments of labour; some to work constantly on the farm, others occasionally to go from home; some to be constantly, or nearly so, at the plough, others frequently at the cart. Thus the benefits of the subdivision of labour may be extended to the farm. When a certain proportion of the draughts are thus set aside for ploughing, *that most* important of all operations will not only be well done by those whose special duty it is to do it, but perseveringly and judiciously done. This proportion is only legitimately employed at any other work when there is no ploughing for them to execute. Ploughing being a steady occupation, not subject to the irregular action of the cart, can be performed by the older men and horses, who cannot so well bear the shocks of carting as younger men and horses.

Weevil in Wheat.—A practical farmer in our county tells us of an experiment he tried in keeping off this scourge of our wheat fields, which proved entirely successful. Last year his crops of rye and wheat were in adjoining fields, and he noticed that his wheat next the rye field was, apparently, unharmed by the weevil, while the remaining part of his wheat was mostly eaten up by the insect.

In the fall of '46, after sowing a small field with wheat, and harrowing it in one way, bestowed a peck of rye over the same ground, and harrowed it in the other way. The result is, his crop of wheat is good, stands 20 bushels to the acre, and is entirely free from the insect; while his neighbours wheat fields, of as good soil, are wholly destroyed by the weevil, and turned to pasture. He is a firm believer that the small quantity

of rye—mixed in sowing—with his wheat saved his crop. We have seen something of this kind mentioned somewhere, and are glad our farmers are testing the result. If the weevil will not touch wheat when rye is growing with it, the mixture should be made until the insect is exterminated.—*Oswego Times.*

Destruction of Trees and Birds.—We have had bounties for the destruction of birds,—only another form of granting gratuities for the propagation of worms and noxious insects. We have converted our wood lands into pastures,—and all that the cattle could not destroy, man has deemed it meritorious to cut down and uproot. Nothing has been left for beauty or shade, and nothing to break the force of the sweeping gale. But there is beginning to be developed another and a better feeling. It is perceived that, in the cultivation of trees, pleasure and utility may be combined; that our worn-out and desolate hills may be covered with verdant and beautiful forests; that our village streets may be adorned with shady rows; and that our gardens and fields may be studded with fruit trees, without diminishing the pasturage or fertility of the farm. A. Otis.

For the Farmers' Cabinet.

Altering.

Some years since I asked Dr. Kirtlant for the best plan for altering old trees. He said, "bud them far out on the limbs, and not later than June, and never cut off a limb." Many trees are killed by cutting large limbs. Much as I have learned from the Doctor, from my own experience I prefer grafting first, in the spring far out, so as to make the limbs small that are cut off—this process invigorates the adjoining smaller limbs, when the budding of smaller branches may be done later, when the buds are older, for buds are mostly too young in June. The following spring all may be pruned off but making an entire change in one year. A.

Early Onions.—A correspondent of the Maine Farmer recommends that onions which are wanted for early maturity, should be sown early in September. With proper preparation of the soil, and sowing the seed by the 15th or 20th of this month, the plants will usually have time to attain the height of four or five inches before the ground closes, and be ready for an early and vigorous start in the spring. In many parts of Massachusetts, and particularly in the vicinity of Boston, where there is always a ready market for early garden vegetables, the practice of autumnal sowing extensively prevails. He observes: "we have seen large beds of this esculent, and sometimes whole *fields* sown in this way, and have cultivated them successively in the same manner ourself."

Preparation of Seed Wheat.—By sieves of suitable size, the largest and best grain may be separated. By washing in water, light seeds of various kinds, and the lightest grain, will swim, and may be skimmed off. By adding salt to the water, which will increase its specific gravity, old imperfect grains, and barley and oats will rise to the surface. Then it will be well to steep the seed a day or two in salt and water; after which add half a peck of fresh slaked lime to a bushel of grain, mix thoroughly, that every kernel may become coated with lime. Let it remain half a day, or night, after liming, and then sow.—*Ex. paper.*

Summer Crops of Peas.—Those of your readers who are fond of a succession of this fine vegetable, and have found difficulty in obtaining such during the drier parts of the summer, may be pleased to learn that they may be successful if they will plant them in shallow trenches, in the same way as they are usually prepared for celery—the trenches should, however, only be five or six inches deep. These trenches catch a supply of moisture during showers and retain it, so that, as I have found, the rows of peas grown in them, are green and luxuriant, when on the flat surface adjoining they fail entirely. *Horticulturist.*

THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK.

Philadelphia, Ninth Month, 1847.

The Burlington County Agricultural Society was organised at Mount Holly on the 16th of second month last, and a Constitution adopted. Dr. Spencer was chosen President — Wm. N. Shinn, Isaac V. Brown, Charles Collins, and Levi Borton, Vice-presidents—Joseph F. Burr, Recording Secretary—Chalkley Gillingham, Corresponding Secretary—and Charles M. Harker, Treasurer—Samuel A. Dobbins, Charles Haines, John W. Black, George B. Deacon, William Parry, and David B. Coles, Executive Committee. The good land, good farming, and wealth of Burlington county, should

be a guaranty for an energetic and efficient Society. Their first Annual Exhibition will be held at Mount Holly on the 29th of next month. A list of premiums offered will be found on page 50.

It is stated in the *Belgian Horticulturist*, that M. Houlton has communicated to the Medico Botanic Society of Louviers, that an onion which he had found in the hand of an Egyptian mummy, which had been entombed more than two thousand years, on being planted in a garden, had vegetated with great strength. It did not vary at all in appearance or qualities from the onion of the present day.

A proposition by John De La Haye, of Liverpool, has appeared in the *Mechanics Magazine*, to build a submarine Railway from Dover to Calais. It is to be placed on the bottom of the sea, which is said to be, across the Straits, very little undulating. He writes as if he thought his plan entirely practicable, at a cost of only £2,500,000. This would be a bolder work than the Thames Tunnel.

The seventeenth Exhibition of the *Franklin Institute* of the State of Pennsylvania, for the promotion of the *Mechanic Arts*, will open at the Museum building in this city on the 19th of next month, and close on the 30th. These have heretofore been occasions of great interest, and the approaching Exhibition, we trust, will not be inferior to those which have preceded it.

Enquiry has been made from York, Pa., whether Parker Askew was correct when he stated in our last number, page 15, that the "first growth" of his *Mediterranean* wheat was apparently destroyed by the *fly*: as the general belief has hitherto been, that this species of wheat was not liable to injury from this insect. The article originally appeared in the Cecil Whig, whence it will be perceived, we copied. But we believe that statements have been made at different times and in different sections of country, that the Mediterranean variety did not continue to be so exempt from the ravages of the fly, as it at first promised to be.

The kindness of W. Bacon, of Richmond, Massachusetts, has put on our table a valuable Abstract from the Returns of Agricultural Societies, in Massachusetts, in 1846.

The *Revue Horticole* speaks of the *Belle Angevine* pear as a variety remarkable for its great size. M. Calle, of Brionne, had produced on one of his trees, a specimen which we should think, hardly need be beat. It weighed 2 lbs. 15 oz. avoirdupois; measured more than 13 inches in circumference, and was nearly eight inches in height.

Silas Wright, who was to have delivered the Address at the New York State Agricultural Show, at Saratoga Springs, we regret to state, has been summoned, after a short illness, to that bourne, whence no traveller returns. We have not been advised whom the Society has selected to supply his place.

The efforts of the Massachusetts Agricultural Society are laudably directed, and with great energy to practical purposes. Not content with having made considerable importations of stock, with a view to the improvement of the breeds of cattle, they have ordered from Paris, at a cost of about $800, the figure of a horse of full size, so constructed as to admit of all the pieces being taken apart. These pieces represent the muscles, blood vessels, heart, lungs, and other organs of their natural size and appearance. They are composed of materials of an imperishable nature, and when put together, form a beautiful object. They have also directed the preparation of the skeletons in full size, of the horse and ox, that an exact knowledge of the limbs of these valuable animals may be within reach of the curious enquirer. When these objects arrive in Boston they will be placed together in some convenient situation, and made accessible to the public without expense.

Reports from almost every section of our country, speak of the fine promise of the corn crop. Wheat flour is worth $5 50 to $6 per barrel, and corn 65 to 70 cents per bushel.

Daniel Lee, of the Genesee Farmer, is to be the future Editor of the *Southern Cultivator*.

J. W. Moore, of this city, has lately published a neat duodecimo volume of some 260 pages, entitled "*Agricultural Botany;* an enumeration and description of useful plants and weeds, which merit the notice or require the attention of American Agriculturists; by William Darlington, M. D." It is dedicated by the author to "The Young Farmers of the United States," to aid and persuade them to cultivate a department of science essential to an enlightened agriculture, and indispensable to an accomplished yeomanry: and it will be found eminently useful for the purpose designed: for whatever Dr. Darlington attempts in these favourite pursuits, will be well done. He addresses himself "to the youthful and aspiring agriculturists of our country, who seek to elevate their noble profession to its just rank among human pursuits,—and who feel that the exercise of intellect, as well as of muscle, is indispensable to the accomplishment of their purpose." We heartily commend the volume to the enquirer who would know something of every plant that grows on his farm. The "Observations," apart from the technical matter, are highly interesting and instructive.

Prince's Catalogues—36th Edition.

Wm. R. Prince & Co., proprietors of the Nurseries at Flushing, L. I., have just published their new Catalogues at an expense of above $1000. The Descriptive Fruit Catalogue is the most complete ever published, and the glands, size and colour of the blossoms of the peaches are given in addition to all other information. Terms $1, post paid, with the application. The old edition will be sent *gratis*.

Sept. 15th, 1847. 2t.

KEPHART'S PATENT

Fruit and Vegetable Preserver.

An admirable invention, by which fruits, vegetables, &c., viz. oranges, lemons, apples, pears, peaches, &c.—potatoes, green corn, melons, &c., can be kept as long as desirable with all their natural juices and sweetness. Also, butter, eggs and bacon can be kept throughout the year, fresh and sweet, at an expense not greater than in an ordinary warehouse in the city. A full description will be found in the June number of the Cabinet.

The undersigned having purchased the Patent-right for the United States, except the states of New Jersey, Delaware and Maryland, and the cities of New York and St. Louis, offer for sale Patent rights for the construction of the PRESERVER, by states, counties or individual rights, upon terms that will induce all interested in the preservation of the above named articles, to purchase rights and construct houses.

FLACK, THOMPSON & BROTHER,
Coates Street wharf, near Fairmount.

All communications will receive prompt attention, if addressed either to PETER KEPHART,
Western Hotel, Baltimore, Md.
Or to FLACK, THOMPSON & BROTHER,
Spring Garden P. O. Philadelphia.

July 15th, 1847.—6t.

FOR SALE,

AT D. O. PROUTY'S

AGRICULTURAL WAREHOUSE,

No. 194½ *Market Street, Philadelphia,*

Corn-Shellers in great variety, price from $1 50 to $50 each; Hovey's Patent Hay, Straw, and Corn-stalk Cutters; Grant's Patent Fan Mills, for chaffing and screening wheat at one operation, warranted to take out cockle, cheat and smut. Also good Fans, for $14 to $18 each.

Whitman's Horse-powers and Threshing Machines, with Straw Carriers and Fan Mills attached; Spain's Improved Barrel Churns, the dashers of which may be taken out to clean. Cheese-presses, &c.; Centre-Draught, Self-sharpening, Right & Left-hand Ploughs, warranted to give satisfaction in their operation.

May 15th—tf.

SEED STORE,

No. 23 Market Street, Philadelphia.

The subscriber keeps constantly a supply of White and Red Clover, and other grass seeds; fresh Perennial Rye-grass, and Lucerne seed. Field seeds, consisting of choice Spring Wheat, Barley, Potatoe Oats, Northern and other seed-corn. Also, in season, Fruit and Shade Trees. Garden and Bird seeds generally. Guano in parcels to suit purchasers.

M. S. POWELL.

Philad., Feb., 1847. tf.

Agency for the Purchase & Sale of

IMPROVED BREEDS OF CATTLE & SHEEP.

THE subscriber takes this method of informing his friends and the public, that he will attend to the purchase and sale of the improved breeds of cattle, sheep, swine, poultry, &c., for a reasonable commission. All letters post paid, addressed to him at Philadelphia, will be attended to without delay.

AARON CLEMENT.

April 15th, 1847.

NEW

Horticultural and Agricultural Ware-house,

84 *Chesnut Street below Third, South side.*

The subscriber has for the better accommodation of his customers, opened the above ware-house, with a large stock of Garden and Field Seeds, crop of 1846. Implements and Books on Gardening and Farming; he calls the particular attention of farmers to his pure stock of Sweede Turnips, Field Carrots, Beets and Parsnips, Pruning Shears, Saws and Knives.

March 14th, 1847.—1y. R. BUIST.

COAL.

THE subscriber has made an arrangement for a constant supply of superior Lehigh and Schuylkill Coal—carefully prepared for family use, which he will furnish *at the usual cash prices*, on application at the office of the Farmers' Cabinet, where samples of the different kinds and sizes may be seen.

JOSIAH TATUM.

Philadelphia, Seventh month 15th, 1847.

COATES' SEED STORE,

No. 49 *Market Street,*

FRESH TIMOTHY SEED,

Of various qualities, from good common seed to the purest and finest that can be produced,

TOGETHER WITH A COMPLETE ASSORTMENT OF

GRASS & GARDEN SEEDS,

Of the finest Quality and best Varieties,—Bird Seeds, &c.

JOS. P. H. COATES,
Successor to George M. Coates.

May 15th, 1847.

☞ SHORT ADVERTISEMENTS,

The subject matter of which, may correspond with the agricultural character of this paper, will be inserted at the rate of one dollar for each insertion of ten lines or less; and so in proportion for each additional line. Payment in advance.

THE quantity of rain which fell in the 8th month, 1847, was ..... 3.18 in.

Penn. Hospital, 9th mo. 1st.

We keep on hand at this office, and will supply our friends with Agricultural works generally. Among which are

THE FARMER'S ENCYCLOPEDIA, full-bound in leather;—Price	$3 50
YOUATT ON THE HORSE, with J. S. Skinner's very valuable Additions;	2 00
BRIDGEMAN'S GARDENER'S ASSISTANT;	2 00
THE AMERICAN POULTRY BOOK;	37½
THE FARMER'S LAND MEASURER;	37½
DANA'S MUCK MANUAL;	50
Complete sets of the FARMERS' CABINET, half-bound, 11 vols.	9 50
DOWNING'S Landscape Gardening,	3 50
Downing's Fruits and Fruit Trees of America,	1 50
SKINNER'S Every Man his own Farrier,	50
AMERICAN Poulterer's Companion.	1 25
BOUSSINGAULT'S RURAL ECONOMY,	1 50
FARMERS' & EMIGRANTS' HAND-BOOK,	1 00
MORRELL'S AMERICAN SHEPHERD,	1 00
STABLE ECONOMY,	1 00
BEVAN on the HONEY BEE,	31½
BUISTS' ROSE MANUAL,	75
THOMAS' FRUIT CULTURIST,	50
SKINNER'S CATTLE & SHEEP DOCTOR,	50
AMERICAN FARRIER,	50
THE FARMER'S MINE,	75
HOARE ON THE VINE,	62½
HANNAM'S Economy of Waste Manures,	25
LIEBIG'S AGRICULTURAL CHEMISTRY,	25
" ANIMAL CHEMISTRY,	25
" FAMILIAR LETTERS,	12½
JOHNSON'S DICTIONARY OF MODERN GARDENING,	2 25

Subscriptions received for Colman's Agricultural Tour—or single numbers sold.

☞ We are prepared to bind books to order.

AFRICAN GUANO.

First quality African Guano, from the island of Ichaboe, warranted genuine. Also a few tons Peruvian.

For sale by J. B. A. & S. ALLEN,
No. 7 South Wharves, 2nd Oil Store below Market street.

Philadelphia, March 17th, 1847.

Poudrette.

A valuable manure—of the best quality, prepared in Philadelphia, for sale at the office of the Farmers' Cabinet, No. 50, North Fourth Street, or at the manufactory, near the Penitentiary on Coates' street. Present price, $1 75 per barrel, containing four bushels each, or 35 cents a bushel. Orders from a distance, enclosing the cash, with cost of porterage, will be promptly attended to, by carefully delivering the barrels on board of such conveyance as may be designated. The results on corn and wheat have been generally very satisfactory. Farmers to the south and in the interior, both of this State and of New Jersey, are invited to try it. We are now ready to supply any demand for wheat.

JOSIAH TATUM.

Philada. 8th mo. 16th, 1847.

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For eight dollars paid in advance, a *complete set* of the work will be furnished in numbers, including the 12th volume. The whole can thus readily be forwarded by mail. For twenty-five cents additional, per volume, the work may be obtained neatly *half-bound and lettered.* Copies returned to the office of publication, will also be bound upon the same terms.

By the decision of the Post Master General, the "Cabinet," is subject only to newspaper postage.

Joseph Rakestraw, Printer.